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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT

DECEMBER, 1937

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GOVERNMENT OF NORTHERN IRELAND

MINISTRY OF AGRICULTURE

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MINISTRY OF AGRICULTURE

MONTHLY REPORT

DECEMBER, 1937.

The long spell of very mild weather has ended rather abruptly, and winter has now set in. Some snow, frosts, a thaw, followed by more frosts, have made roads very treacherous, and the volume of trade at recent cattle fairs has suffered in consequence. In view of the general improvement of late in the demand for all classes of cattle, it is to be hoped that business will not become disorganised in any way as a result of a prolonged period of very cold weather.

Lower temperatures and frost-bound pastures have made necessary the housing of live-stock and the use of increased supplies of feeding stuffs. Fortunately there are good stocks of home-grown fodder and roots available this year, but meals and concentrated foods are dear, and there seems little prospect of prices easing in the near future. The rather unsatisfactory state of the potato industry, with the consequent lowness of prices, will doubtless induce many farmers to use potatoes to an increased extent for feeding to livestock, and this should help appreciably in keeping down the outlay in purchased feeding-stuffs for cattle and pigs.

The seasonal demand for poultry has as yet shown but few signs that would indicate the trend of trade this year for turkeys and geese, but in view of the general state of industry and the cost of living compared with a year ago, there appears to be a probability that prices for these classes of poultry will, at least, be equal to those ruling in December, 1936.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st DECEMBER, 1937

Yet another month of favourable weather has helped farmers to make further headway with seasonal farm work, and the general position in this respect is now very satisfactory.

During most of the daylight hours of November the weather was fine and open with temperatures rather high for late autumn. There were several short rainy periods, notably from the middle of the month onwards, when colder conditions ruled. Ground frosts at night time were few and comparatively light for the season.

Farmers were enabled to proceed with such seasonal outdoor work as ploughing, the sowing of wheat, the carting and spreading of farmyard manure on stubble land before ploughing, the trimming and renovation of hedges and the cleaning of ditches. All farm work is now in an advanced state for the season of the year, so that, should suitable conditions prevail, the work connected with the sowing and planting next spring can be undertaken in good time; further, such work should be lessened to an appreciable extent seeing that land is being ploughed early and in time to permit of the winter frosts mellowing the upturned soil and making it friable and amenable to cultivation.

The sowing of wheat was almost completed under favourable weather conditions, and as a general rule brairding has been strong and regular.

Pastures, which were reasonably well managed during recent years, remained in remarkably good condition for the time of year, the mild conditions keeping the grass fresh and green, and thus maintaining a fairly good amount of "keep" for livestock throughout the month. On the other hand the mat of old grass on badly grazed and improperly managed pasture fields took on a greyish appearance and otherwise looked unappetising and innutritious.

Lime was freely applied to both grass and ploughed lands during November, and there were general indications that farmers were taking full advantage of the Land Fertility Scheme. Basic Slag and Gafsa Rock Phosphate were also being used to a fair extent for the top dressing of pastures.

There is little new to report in regard to the position of feeding stuffs; stocks of home-grown foods are adequate, and purchased meals and concentrates remain fairly plentiful though dear.

Cattle and sheep benefited from the mild conditions and have made moderately good progress. It is understood that the continued high costs of feed-

ing stuffs is proving a serious handicap to many stock-owners now that partial hand-feeding is necessary to maintain outwintered stock in a thriving state. Stall-feeding for beef has declined in extent partly on this account, and more so perhaps because of the comparatively higher prices ruling for store cattle.

THE CROPS

WHEAT.—The sowing of autumn varieties was practically finished in all districts, and the general appearance of the brairds so far is good. The unusually good weather and soil conditions during the past two months has ensured that already a larger area has been sown under this crop than last year.

The threshing of wheat was completed in most districts during November, and elsewhere this work was well advanced. The results have given general satisfaction, the grain yielding well and being of good quality. The estimated returns indicate that the grain yielded from 20 to 24 cwt. to the acre, and the straw around 30 cwt. Good grain has been fetching from 9/6d. to 10/6d. per cwt., and a few sales of seed have taken place at around 1/6d. per stone. Sales of specially drawn straw for thatching purposes were effected at from £4 10s. 0d. to £7 per ton.

OATS.—The threshing of this crop was continued more or less generally during last month, and about one-third of the entire crop has now been threshed. Yields of from 18 to 22 cwt. per acre of fairly good quality grain have been obtained, and the straw has also given satisfactory returns in most districts.

Decreased supplies of white oats were offered at markets during November, as compared with October, and prices averaged 6/10¼d. per cwt., a fall of ½d. on the month. Oat straw was in larger quantities and 3d. cheaper at an average of 42/8d. per ton.

BARLEY.—As a considerable proportion of this crop is grown for feeding to stock, threshing is not a seasonal operation, but is spread over a fairly long period, being carried out when necessary or convenient. In some districts, however, this work has been completed, but in others it has not yet begun. The results of last month's threshing of barley have been disappointing. The yields on farms from which reports have been received range from 10 to 22 cwt. per acre, and it is likely that the average yield for the entire crop will be lower than usual. The quality of the grain is only fair in most cases.

FLAX.—Scutching was more general last month, and in most districts is now in full swing. Reports indicate that the yields may vary in extent from

slightly below to above the average, and the quality of the fibre from fair to good.

Considerably larger quantities were marketed last month, during which prices ruled steady at from 8/- to 11/6d., or an average price of 9/8½d. per stone. For November, 1936, the average price was 9s. per stone.

POTATOES.—This crop, which grew out well at the end of the season, is a much better one than that harvested in 1936 in regard to size and quality of the tubers and yields per acre.

In most areas the yields of sound tubers will be above average dimensions. Disease has generally caused less damage than usual, although in crops grown on wet land and heavy soils it has wrought extensive damage, chiefly among the white varieties, Up-to-date and Arran Banner. Of the principal varieties Arran Victory stands out as the least affected by disease this season.

Trade remained dull for ware varieties and prices were again easier on the month.

At local markets supplies increased and prices for all classes averaged 2/6½d. per cwt. compared with 2/8¾d. in October. In November, 1936, the average figure was 3/7½d. per cwt.

Supplies inspected for shipment during last month increased in volume, but trade was conducted at cheaper rates, growers' prices showing decreases of from 2/6d. to 5/- per ton on the month. The following were the prices per ton ruling during the week ended 4th December:—

	WARE.	
	Bagged	*Loose*
Up-to-Date (Red soil)	£2-0-0 to £2-5-0	£2-0-0 to £2-5-0
Up-to-Date (Grey soil)	£2-5-0	——
Arran Banner	£1-15-0 to £2-0-0	£1-15-0
Arran Consul	£2-5-0	£2-0-0
Arran Victory	£2-0-0 to £2-5-0	£1-15-0 to £2-0-0
Kerr's Pink	£2-0-0 to £2-5-0	£1-17-6 to £2-5-0

Compared with the prices for the corresponding week in 1936, the above figures show reductions of from £1 10s. 0d. to £2 per ton from the general price ranges of from £3 10s. 0d. to £4 5s. 0d. for bagged potatoes, and £3 5s. 0d. to £4 for loose.

There has been a good enquiry for seed potatoes during recent weeks, and at the beginning of December the following prices per ton were paid to growers:—

	SEED.	
	Bagged	*Loose*
Majestic	£4-10-0 to £5-0-0	——
Up-to-Date	£4-0-0 to £4-15-0	£3-10-0
Arran Banner	£3-10-0	£3-0-0

The following were the quantities of potatoes inspected for shipment to Great Britain:—

Week ended	*Tons*	*Week ended*	*Tons*
6th November, 1937	4,068	7th November, 1936	4,720
13th ,,	4,672	14th ,,	4,332
20th ,,	3,635	21st ,,	7,017
27th ,,	4,979	28th ,,	7,074
4th December, 1937	4,120	5th December, 1936	5,911

It should be noted that the Potato Marketing Board in Great Britain has raised the riddle standards for potatoes recently in order to strengthen the market situation there.

MANGELS.—On most farms the roots have been lifted and stored in good condition. The yields are on the low side in a few districts, but on the whole the crop is expected to yield fully up to average dimensions. The roots are generally firm and of good quality. Some estimates of yields range from 20 to 30 tons per acre.

TURNIPS.—This crop benefited from the mild weather of late, but on a number of farms the roots are small and have not recovered from the set-backs suffered during the wet weather of the summer. As a general rule turnips are in good condition, and although estimates of yields vary from 17 to 28 tons per statute acre, the average for the crop will be much better than anticipated earlier this season. Very little disease of the roots is noticeable so far.

HAY.—The threshing of seeds hay has ended with, on the whole, fairly satisfactory results as regards yields, but unfortunately prices have not improved. Increased supplies of Italian seed were marketed, but Perennial and Mixed seeds decreased on the month. Average prices for November recorded a further general decline, Italian being 2½d. cheaper at 7/7½d., Perennial 8½d. cheaper at 8/10½d., and Mixed 4¼d. cheaper at 6/5¾d. per cwt. Crested Dogstail was offered in small supplies during the month, and prices were below those for October at from 40/- to 56/- per cwt.

The returns of the hay crops harvested last season are shown on page 401.

Larger supplies of hay were marketed last month, and the average price of upland hay was 4d. dearer than for October, at 61/6d. per ton, whilst meadow hay was 1/1d. cheaper at 45/- per ton.

CABBAGE AND KALE.—With the increase in the acreage planted under these crops there are larger supplies available this year. The produce, generally, is of good quality, and is being used for feeding to dairy cows in the house, instead of turnips, on those farms where the crops are grown.

LIVE STOCK.

CATTLE.—Stores made a fairly good thrive during the past month and, excepting a few cases of "hoose" and "red-water", the bill of health is clean.

Dairy cattle have improved in condition of late, and most of the herds entered the winter season in a fitter state than usual. Calving has been normal in most instances, but sterility and abortion are still common sources of trouble in some parts of the country. The milk yield has shown a normal seasonal decline in nearly all districts.

Medium to small offerings of store cattle at fairs last month met with a generally steady trade at firm rates. Good young cattle and older animals in forward condition were bought up readily at prices showing advances on the previous month. Dairy cattle were forward in small to medium numbers, and first and second quality animals continued to meet a good demand at fully recent prices.

SHEEP.—The flocks are in good condition and health. The continuance of mild and comparatively dry ground conditions, with good supplies of "keep" proved beneficial and also assisted in keeping down attacks of seasonal diseases such as liver fluke and foot-rot.

It is generally considered that there has been a slight increase in the numbers of breeding ewes and lambs compared with the 1936 season. This is attributed to the satisfactory prices ruling for fat lambs, the scarcity of store cattle, and to the fact that the high prices of cakes and meals have had a relatively small effect on the costs of production in the case of sheep.

With the end of the season of sales of breeding sheep, trade generally has slackened somewhat and prices have moved in a downward direction. Supplies at fairs last month were mainly composed of small numbers of fat sheep and stores for feeding.

PIGS.—Supplies of young pigs at fairs held during November were mostly of average dimensions. The demand for these was steady to good at easier rates of about 32/6d. per head, for 8 to 12 weeks' old, suckers and up to 47/6d. for those of from 14 to 16 weeks old. Sows for breeding were offered in small to medium numbers, and trade for the best types was good at prices ranging from £8 up to £15 each.

Supplies of pork last month were of large dimensions for the time of year, but curers were less active in making purchases, particularly towards the close of the month.

HORSES.—The demand for good young farm horses and first-class draught horses remained fairly steady at prices ranging up to £60 each. Trade was generally easier on the month, and the general run of prices for ordinary farm horses was from £25 to £30 each.

Milk.—Supplies are stated to have shown a general decline, but the milk yield has been maintained at a seasonal level on most farms. It was learned that the high prices of concentrates was a serious handicap to many owners of dairy cattle and possibly accounted for the yields falling below the normal in a few instances.

Creameries paid from 4½d. to 5½d. per gallon for milk delivered, the separated milk being returned to the farmer. The rate of equalisation payment for milk produced in Northern Ireland and delivered to creameries for manufacturing purposes has been determined at 0.20d. per gallon for the month of October, 1937, in accordance with the Milk and Milk Products Act (Northern Ireland), 1934. It should be noted that under the Regulations creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier. The attention of suppliers is directed to the special notice on page 413 of this report.

THE COST OF LIVING INDEX FIGURE.

The cost of maintaining unchanged the pre-War standard of living of working-class families at November 1st was 60 per cent. above the level of July, 1914, as against 58 per cent. at October 1st, 1937, and 51 per cent. at October 31st, 1936.

At November 1st the index of retail prices of food in Great Britain and Northern Ireland, as ascertained by the Ministry of Labour, was 46 per cent. above that of July, 1914, as compared with 43 per cent. at October 1st, and 36 per cent. a year ago. The further rise in the index was mainly due to increases in the prices of butter, eggs, milk and cheese; partly offset, however, by reductions in the prices of bacon and potatoes.

THE MARKETS DURING NOVEMBER.

At the markets last month supplies of the principal vegetables were larger, cabbage being the only vegetable in shorter supply than in October. Price movements in most instances had a downward trend. The average price of cabbage was 5d. cheaper at 1/- per dozen, and savoys cheapened by 2¼d. to 1/1¼d. per dozen, leeks by ¼d. to 5d. per bunch, carrots by 1/9d. to 10/3d. per cwt., and parsnips by 1/5d. to 9/7d. per cwt. Garden turnips at 2/- per cwt. were also cheaper on the month. Cauliflowers, however, were unchanged in price and averaged 1/9d. per dozen for the month, and parsley was firm at 5¼d. per bunch.

The increase in supplies of farmers' print butter was offset by shorter supplies of lump butter, and prices generally advanced during the month in sympathy with the trend of creamery butter prices. Print butter was 1½d. dearer and averaged 1/4¼d. per lb., and lump 3⅜d. dearer at 1/4d. per lb.

Hen eggs were seasonally reduced in supply, but duck eggs were more plentiful than in October. Prices, as fixed by the Ministry of Agriculture, applied.

In the poultry markets, hens and chickens were reduced in numbers, but ducks were more plentiful. Hens were 1½d. dearer at 1/8d. each, but chickens and ducks declined in value by ½d. and 2d. each to 2/4¾d. and 2/1½d. each respectively.

There were small quantities of unwashed wool marketed during the month, and long cheapened by ¾d. to 10d. per lb., and mountain by 1d. to 9½d. per lb.

LIVE STOCK CENSUS, OCTOBER 1937.

A further quarterly census of live stock was taken at the 1st October last. The census was taken on lines similar to those in April this year, and in the same months in 1935 and 1936. Forms were sent to some 19,000 farmers with a request that they should supply particulars of the numbers of cattle, sheep and pigs on their farms at the 1st October, 1937, and 10,000 made returns. The numbers of live stock in Northern Ireland were estimated from these returns.

The result of the estimate, together with the estimated number of live stock at the 1st October, 1936, and the numbers returned at the complete enumeration at the 1st June, 1937, are shown in the table below with the percentage changes which have occurred in the numbers since each of those dates.

	1st October, 1937	1st June, 1937	1st October, 1936	% Change as compared with	
				1st June, 1937	1st October, 1936
	No.	No.	No.		
Milch Cows ..	238,000	237,241	251,000	+ 0.3	− 5.2
Heifers in Calf ..	34,000	22,646	28,000	+50.1	+21.4
Other Cattle ..	471,000	470,222	482,000	+ 0.2	− 2.3
Total Cattle	743,000	730,109	761,000	+ 1.8	− 2.4
Ewes ..	401,000	376,916	399,000	+ 6.4	+ 0.5
Other Sheep ..	224,000	451,935	203,000	−50.4	+10.3
Total Sheep	625,000	828,851	602,000	−24.6	+ 3.8
Sows	55,000	54,399	60,000	+ 1.1	− 8.3
Other Pigs ..	526,000	515,659	519,000	+ 2.0	+ 1.3
Total Pigs ..	581,000	570,058	579,000	+ 1.9	+ 0.3

EXTENT AND PRODUCE OF THE HAY CROP IN NORTHERN IRELAND IN 1937.

The total yield of the Hay Crop in Northern Ireland, in 1937, is estimated at 833,396 tons as follows:— First Year's Hay 210,076 tons, Second and Third Year's Hay 146,264 tons, and permanent Meadow 477,056 tons. The estimated average yield of the entire crop is 1.9 tons per statute acre, as compared with 1.8 tons in 1936, and is similar to that of 1935. The average yield for the ten years 1927-1936 amounted to 1.8 tons per statute acre.

The following table shows the extent in statute acres, the estimated total produce and the average estimated yield per statute acre in the year 1937, with comparative figures for 1936, and the ten years' period 1927-1936:—

	1st Year's			2nd & 3rd Years'			Permanent Meadow			Total Hay		
	Total Acreage	Average Yield	Total Produce	Total Acreage	Average Yield	Total Produce	Total Acreage	Average Yield	Total Produce	Total Acreage	Average Yield	Total Produce
	Acres	Tons	Tons	Acres	Tons	Tons	Acres	Tons	Tons	Acres	Tons	Tons
1937	124,307	1.7	210,076	88,023	1.7	146,264	218,416	2.2	477,056	430,746	1.9	833,396
1936	124,520	1.5	191,636	80,925	1.5	124,212	210,236	2.0	414,914	415,681	1.8	730,762
Average for the 10 years 1927-36	139,133	1.6	228,592	83,751	1.6	132,669	228,448	2.0	462,251	451,332	1.8	823,512

DISTRIBUTION OF PIGS ON HOLDINGS IN NORTHERN IRELAND.

In the Monthly Report for April of this year the pig census, taken at the 1st June, 1936, and at the 1st January, 1937, were analysed to show the distribution of pigs in Northern Ireland according to counties, and also according to size of holding. The returns for the census taken at the 1st June, 1937, have been similarly analysed, and are discussed at some length in this article.

The extent to which pigs are kept in each of the six counties is indicated in the following table, which gives the number of pig-keepers, pigs and sows in each county, at the 1st June last :—

County.	Pig-Keepers.		Pigs (all classes).		Sows.	
	No.	%	No.	%	No.	%
Antrim ..	7,734	19.3	145,641	25.5	13,304	24.5
Armagh ..	5,331	13.3	68,184	12.0	6,053	11.1
Down ..	6,590	16.5	136,486	23.9	13,534	24.9
Fermanagh ..	4,768	11.9	38,571	6.8	3,580	6.6
Londonderry ..	5,716	14.3	88,794	15.6	9,203	16.9
Tyrone ..	9,874	24.7	92,382	16.2	8,725	16.0
Northern Ireland ..	40,013	100.0	570,058	100.0	54,399	100.0

It will be observed that while practically one-fourth of the pig-keepers in Northern Ireland are in County Tyrone they account for less than one-sixth of the total pig population. Almost half the pig population and sow population is concentrated in counties Antrim and Down, and slightly less than one-third in counties Londonderry and Tyrone. In each county the percentage of sows corresponds fairly closely with the percentage of pigs.

The following table shows the number of pig-keepers on varying sizes of holdings in each county at 1st June, 1937 :—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
0- 1 ..	224	74	150	99	150	219	916
1- 5 ..	169	281	196	98	165	190	1,099
5- 10 ..	337	888	503	253	406	638	3,025
10- 15 ..	544	786	625	358	537	893	3,743
15- 30 ..	1,879	1,684	1,878	1,452	1,468	2,650	11,011
30- 50 ..	1,922	948	1,596	1,221	1,154	2,205	9,046
50-100 ..	1,820	490	1,246	929	1,120	2,156	7,761
100-200 ..	470	70	268	217	355	697	2,077
200-500 ..	98	9	41	66	96	87	397
Over 500 ..	21	2	6	11	16	36	92
Not on farms ..	250	99	81	64	249	103	846
Total ..	7,734	5,331	6,590	4,768	5,716	9,874	40,013

It will be noted that pig-keepers occupying holdings not exceeding 30 acres account for almost half the total number, and those with holdings between 50 and 200 acres for slightly less than one-fourth.

The distribution of pig-keepers, according to size of holding, will be more readily appreciated from the following table, which shows the number of pig-keepers on varying sizes of holdings on a percentage basis :—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
	%	%	%	%	%	%	%
0- 1 ..	2.9	1.4	2.3	2.1	2.6	2.2	2.3
1- 5 ..	2.2	5.3	3.0	2.0	2.9	1.9	2.7
5- 10 ..	4.4	16.6	7.6	5.3	7.1	6.5	7.6
10- 15 ..	7.0	14.7	9.5	7.5	9.4	9.0	9.4
15- 30 ..	24.3	31.6	28.5	30.5	25.7	26.9	27.5
30- 50 ..	24.8	17.8	24.2	25.6	20.2	22.3	22.6
50-100 ..	23.5	9.2	18.9	19.5	19.6	21.8	19.4
100-200 ..	6.1	1.3	4.1	4.6	6.2	7.1	5.2
200-500 ..	1.3	0.2	0.6	1.4	1.7	0.9	1.0
Over 500 ..	0.3	—	0.1	0.2	0.3	0.4	0.2
Not on farms ..	3.2	1.9	1.2	1.3	4.3	1.0	2.1
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

It will be observed that, except in County Antrim, the proportion is greatest on holdings between 15 and 30 acres. In County Armagh almost 40 per cent. of the pig-keepers occupy holdings of not more than 15 acres. Taking Northern Ireland as a whole, almost 70 per cent. of the pig-keepers occupy holdings varying from 15 to 100 acres.

The following table shows the numbers of pigs per 1,000 acres of crops and pasture on different classes of holdings in each county at the 1st June, 1937 :—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
0- 1 ..	735	445	298	637	963	479	535
1- 5 ..	391	196	266	208	466	190	268
5- 10 ..	247	247	186	139	287	171	214
10- 15 ..	282	224	204	130	306	176	219
15- 30 ..	282	231	276	130	261	175	226
30- 50 ..	285	255	281	138	256	191	237
50-100 ..	306	248	295	127	246	181	242
100-200 ..	279	235	243	90	214	150	206
200-500 ..	144	160	235	79	184	141	161
Over 500 ..	78	1,772	62	59	77	54	112
All farms ..	280	245	265	125	247	176	227

In the following table are given, by counties, the number of pigs on varying sizes of holdings at the 1st June, 1937 :—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
0- 1 ..	1,522	468	932	410	1,029	833	5,194
1- 5 ..	1,863	1,709	2,453	469	1,466	1,007	8,967
5- 10 ..	3,260	7,000	4,854	1,125	3,141	3,230	22,610
10- 15 ..	5,901	7,215	6,638	1,953	5,643	5,486	32,836
15- 30 ..	24,587	19,113	29,276	9,005	17,205	20,264	119,450
30- 50 ..	32,646	14,571	32,490	10,480	18,475	23,039	131,701
50-100 ..	48,627	11,254	40,597	10,241	24,478	26,120	161,317
100-200 ..	18,784	3,351	12,289	3,203	11,357	9,106	58,090
200-500 ..	3,338	609	4,141	1,049	4,115	2,240	15,492
Over 500 ..	1,106	1,910	513	379	483	290	4,681
Not on farms ..	4,007	984	2,303	257	1,402	767	9,720
Total ..	145,641	68,184	136,486	38,571	88,794	92,382	570,058

Except in counties Armagh and Fermanagh, the greatest number of pigs is to be found on holdings between 50 and 100 acres. Approximately two-thirds of the total number of pigs were on holdings of 30 acres and upwards.

The numbers of pigs on varying sizes of holdings are shown on a percentage basis for each county in the following table:—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
	%	%	%	%	%	%	%
0- 1 ..	1.0	0.7	0.7	1.1	1.2	0.9	0.9
1- 5 ..	1.3	2.5	1.8	1.2	1.7	1.1	1.6
5- 10 ..	2.2	10.3	3.6	2.9	3.5	3.5	4.0
10- 15 ..	4.0	10.6	4.9	5.1	6.3	5.9	5.7
15- 30 ..	16.9	28.0	21.4	23.3	19.4	21.9	21.0
30- 50 ..	22.4	21.4	23.8	27.2	20.8	24.9	23.1
50-100 ..	33.4	16.5	29.7	26.5	27.6	28.3	28.3
100-200 ..	12.9	4.9	9.0	8.3	12.8	9.9	10.2
200-500 ..	2.3	0.9	3.0	2.7	4.6	2.4	2.7
Over 500 ..	0.8	2.8	0.4	1.0	0.5	0.3	0.8
Not on farms ..	2.8	1.4	1.7	0.7	1.6	0.9	1.7
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Contrasting the figures in this table with those in the table on page 403 it will be noted that while pig-keepers occupying holdings of 50 acres and upwards represented only 25.8 per cent. of the total they accounted for 42 per cent. of the total pig population.

The following table shows the numbers of persons keeping sows on varying sizes of holdings in each county at the 1st June, 1937:—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
0- 1 ..	41	10	36	3	24	16	130
1- 5 ..	60	97	68	9	39	34	307
5- 10 ..	127	421	260	51	166	138	1,163
10- 15 ..	244	401	373	109	265	261	1,653
15- 30 ..	1,418	951	1,303	520	847	1,142	6,181
30- 50 ..	1,188	607	1,217	596	747	1,118	5,473
50-100 ..	1,296	337	1,045	486	802	1,188	5,154
100-200 ..	359	47	216	122	292	350	1,386
200-500 ..	89	8	32	20	73	44	266
Over 500 ..	19	2	4	5	11	5	46
Not on farms ..	36	7	14	—	35	7	99
Total ..	4,877	2,888	4,568	1,921	3,301	4,303	21,858

Counties Antrim, Down and Tyrone accounted for 63 per cent. of the total number of sow-keepers, and over three-fourths of the number of sow-keepers were occupiers of holdings between 15 and 100 acres. The position in each county will be more easily observed from the following table, in which the figures are shown on a percentage basis :—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
	%	%	%	%	%	%	%
0- 1 ..	0.8	0.3	0.8	0.1	0.7	0.4	0.6
1- 5 ..	1.2	3.4	1.5	0.5	1.2	0.8	1.4
5- 10 ..	2.6	14.6	5.7	2.7	5.0	3.2	5.3
10- 15 ..	5.0	13.9	8.2	5.7	8.0	6.1	7.6
15- 30 ..	29.1	32.9	28.5	27.1	25.7	26.5	28.3
30- 50 ..	24.4	21.0	26.6	31.0	22.6	26.0	25.0
50-100 ..	26.6	11.7	22.9	25.3	24.3	27.6	23.6
100-200 ..	7.4	1.6	4.7	6.3	8.9	8.1	6.3
200-500 ..	1.8	0.3	0.7	1.0	2.2	1.0	1.2
Over 500 ..	0.4	0.1	0.1	0.3	0.3	0.1	0.2
Not on farms ..	0.7	0.2	0.3	—	1.1	0.2	0.5
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Except in Counties Fermanagh and Tyrone, the proportion of sow-keepers was greatest on holdings of from 15 to 30 acres. In County Armagh practically one-third of the sow-keepers were occupiers of holdings not exceeding 15 acres. It is interesting to note that the number of persons engaged in pig production on holdings up to 15 acres in County Armagh is relatively much greater than in any other county.

The total sow population at the 1st June, 1937, was distributed over 21,858 holdings, giving an average of between 2 and 3 sows per holding. In the following table are given the numbers of sows on varying sizes of holdings in each county :—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
0- 1 ..	74	15	65	10	58	26	248
1- 5 ..	227	130	149	13	65	64	648
5- 10 ..	252	651	551	69	316	207	2,046
10- 15 ..	568	600	717	162	553	444	3,044
15- 30 ..	2,516	1,722	3,174	820	1,888	1,803	11,923
30- 50 ..	3,291	1,333	3,358	1,095	2,016	2,198	13,291
50-100 ..	4,393	1,115	3,968	960	2,598	2,710	15,744
100-200 ..	1,425	200	1,074	301	1,214	963	5,177
200-500 ..	404	55	351	112	395	246	1,563
Over 500 ..	73	220	84	38	63	44	522
Not on farms ..	81	12	43	—	37	20	193
Total ..	13,304	6,053	13,534	3,580	9,203	8,725	54,399

It will be observed that, except in counties Armagh and Fermanagh, the greatest number of sows was on holdings between 50 and 100 acres. For ease of comparison the figures for each county are shown on a percentage basis in the following table:—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
	%	%	%	%	%	%	%
0- 1 ..	0.6	0.3	0.5	0.3	0.6	0.3	0.5
1- 5 ..	1.7	2.2	1.1	0.4	0.7	0.7	1.2
5- 10 ..	1.9	10.8	4.1	1.9	3.4	2.4	3.8
10- 15 ..	4.3	9.9	5.3	4.5	6.0	5.1	5.6
15- 30 ..	18.9	28.4	23.5	22.9	20.5	20.7	21.9
30- 50 ..	24.7	22.0	24.8	30.6	21.9	25.2	24.4
50-100 ..	33.0	18.4	29.3	26.8	28.3	31.1	28.9
100-200 ..	10.7	3.3	7.9	8.4	13.2	11.0	9.5
200-500 ..	3.0	0.9	2.6	3.1	4.3	2.8	2.9
Over 500 ..	0.6	3.6	0.6	1.1	0.7	0.5	0.9
Not on farms ..	0.6	0.2	0.3	—	0.4	0.2	0.4
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

As one would expect, the figures in this table are broadly similar to those in the table on page 404 showing the distribution of the pig population by counties according to varying sizes of holdings. Holdings between 15 and 100 acres accounted for about 75 per cent. of the total number of sows, more than half of the sow population being concentrated on holdings between 30 and 100 acres.

In the following table the numbers of sows on different sizes of holdings in each county are shown as percentages of the total pigs on such holdings:—

Class of Farm (Statute Acres)	Antrim.	Armagh.	Down.	Fermanagh.	Londonderry.	Tyrone.	Northern Ireland.
	%	%	%	%	%	%	%
0- 1 ..	6.4	3.2	7.0	2.4	5.6	3.1	4.8
1- 5 ..	12.2	7.6	6.1	2.8	4.4	6.4	7.2
5- 10 ..	7.7	9.3	11.4	6.1	10.1	6.4	9.0
10- 15 ..	9.6	8.3	10.8	8.3	9.8	8.1	9.3
15- 30 ..	10.2	9.0	10.8	9.1	11.0	8.9	10.0
30- 50 ..	10.1	9.2	10.3	10.4	10.9	9.5	10.1
50-100 ..	9.0	9.9	9.8	9.4	10.6	10.4	9.8
100-200 ..	7.6	6.0	8.7	9.4	10.7	10.6	8.9
200-500 ..	12.1	9.0	8.5	10.7	9.6	11.0	10.1
Over 500 ..	6.6	11.5	16.4	10.0	13.0	15.2	11.2
Not on farms ..	2.0	1.2	1.9	—	2.6	2.6	2.0
Total ..	9.1	8.9	9.9	9.3	10.4	9.4	9.5

The following table shows the percentage number of pigs on varying sizes of holdings in Northern Ireland at the 1st June in each of the years 1925, 1930, 1934, 1935 and 1937 :—

Class of Farm (Statute Acres)	At 1st June, 1925	At 1st June, 1930	At 1st June, 1934	At 1st June, 1935	At 1st June, 1937
	%	%	%	%	%
0- 1 ..	1.1	0.9	0.9	1.0	0.9
1- 5 ..	1.7	1.4	1.5	1.6	1.6
5- 10 ..	4.8	4.2	3.8	3.8	4.0
10- 15 ..	6.9	6.6	5.6	5.6	5.7
15- 30 ..	23.7	24.2	21.3	20.4	21.0
30- 50 ..	23.6	24.6	23.2	23.3	23.1
50-100 ..	25.2	26.1	27.9	28.5	28.3
100-200 ..	8.1	7.9	10.3	10.4	10.2
200-500 ..	2.8	2.1	2.6	2.6	2.7
Over 500 ..	0.4	0.4	0.9	0.8	0.8
Not on farms ..	1.7	1.6	2.0	2.0	1.7
Total	100.0	100.0	100.0	100.0	100.0

Between 1925 and 1935 there was a progressive increase in the proportion of pigs kept on holdings between 50 and 100 acres. The figures for 1937, however, show that the distribution of pigs, according to size of holding, has remained practically unchanged since 1934. By arranging the figures in groups, as in the following table, it will be seen that there has been a downward movement in the figures for holdings under 30 acres, as compared with an upward movement in the figures for holdings over 30 acres :—

Class of Farm (Statute Acres)	At 1st June, 1925	At 1st June, 1930	At 1st June, 1934	At 1st June, 1935	At 1st June, 1937
	%	%	%	%	%
0- 30 ..	38.2	37.3	33.1	32.4	33.2
30-100 ..	48.8	50.7	51.1	51.8	51.4
Over 100 ..	11.3	10.4	13.8	13.8	13.7
Not on farms	1.7	1.6	2.0	2.0	1.7
Total ..	100.0	100.0	100.0	100.0	100.0

The latest particulars available in respect of numbers of holdings of varying sizes in each county are those returned in the census taken at the 1st June, 1936, and as it is very improbable that the corresponding figures at the 1st June, 1937, will show any appreciable change it is justifiable to relate the number of holdings of varying sizes on which pigs were kept at the 1st June, 1937, to the total numbers of various classes of holdings at the 1st June, 1936. This relation is shown on a percentage basis in the following table:—

Class of Holding (Statute Acres)	Antrim	Armagh	Down	Fermanagh	Londonderry	Tyrone	Northern Ireland.	
							Holdings on which pigs were kept	Total No. of Holdings
	%	%	%	%	%	%	%	
0- 1	2.7	2.8	1.2	7.9	6.3	5.9	2.9	31,326
1- 5	10.9	11.3	6.8	14.2	18.2	12.7	11.0	10,028
5- 10	19.6	23.8	14.9	24.5	29.0	26.6	22.2	13,646
10- 15	31.7	30.3	23.6	28.7	36.4	35.6	30.7	12,187
15- 30	44.5	41.3	36.7	42.1	45.8	44.8	42.4	25,994
30- 50	58.9	57.4	50.7	52.7	56.1	57.9	55.7	16,249
50-100	64.7	64.1	55.8	61.8	63.8	74.4	64.8	11,968
100-200	63.9	48.3	58.1	57.6	59.6	84.4	66.1	3,141
200-500	54.4	45.0	45.1	78.6	51.6	49.4	53.9	737
Over 500	34.4	28.6	31.6	57.9	36.4	80.0	47.2	195
Total	30.5	28.9	19.7	39.3	39.0	41.1	31.2	125,471
Total (excluding holdings under 1 acre)	44.6	33.3	31.8	43.0	45.7	47.6	40.6	94,145

These figures indicate generally that pigs are kept on roughly four out of every ten holdings over 1 acre in Northern Ireland, and that the proportion of pig-keepers in each category increases with the size of holding up to about 100 acres.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.), 1934.

PIG PRICES FOR DECEMBER, 1937.

The following announcement has been made by the Pig Industry Council for Northern Ireland.

Prices for Dead Pigs.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland, in December, 1937, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs.
c.1.0.21 to c.1.1.13	67/6	64/6	61/6	57/6	5/- below relevant Grade Price.
c.1.1.14 to c.1.2.3	71/6	68/6	65/6	61/6	
Weight Class. (Dead Weight)	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2.4 to c.1.2.14	71/6	68/6	65/6	62/6	
c.1.2.15 to c.1.3.14	71/6	68/6	65/6	62/6	
c.1.3.15 to c.2.0.0	68/6	65/6	62/6	59/6	
c.2.0.1 to c.2.0.14	62/6	59/6	56/6	53/6	

Pig Carcases c.1.0.0 to c.1.0.20 :—64/6.

Authorised cuts:—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase is wholly condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction, and pig carcases badly abused or damaged before being handed over by the producer to the curer.

Prices for Wiltshire Pigs Sold on Direct Contract.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of December, 1937, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.0.21 to c.1.1.13	77/6	74/6	71/6	67/6	64/6
c.1.1.14 to c.1.2.3	77/6	74/6	71/6	67/6	64/6
	Grade A.	Grade B.	Grade C.		U.L. or U.F.
c.1.2.4 to c.1.2.7	74/6	71/6	68/6		65/6
c.1.0.0 to c.1.0.20	Suitable 66/6		Unsuitable 64/6		
Over c.1.2.7	On the same basis as pigs sold dead.				

Prices for Live Pigs Sold to the Pigs Marketing Board (Northern Ireland).

In the case of pigs sold alive to the Pigs Marketing Board during December, 1937, the prices per live cwt., according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.	Unsuitable.
c.1.1.14 to c.1.2.13	50/–	50/–	50/–	48/6
c.1.2.14 to c.2.0.0	58/3	56/–	53/9	U.L. or U.F. 50/9 / 48/6
c.2.0.1 to c.2.1.14	53/9	51/6	49/3	47/–
c.2.1.15 to c.2.2.7	51/6	49/3	47/–	44/9
c.2.2.8 to c.2.2.21	47/–	44/9	42/6	40/3

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0. to c.2.2.21 can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy and contribution at present amounting to 1/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

In the case of pigs sold to the Board, there is a deduction of 2/6d. per pig for marketing charges.

GRADING STATISTICS.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated during October, 1937.

Under 1.0.21		c.1.0.21 to c.1.1.13					c.1.1.14 to c.1.2.3					Totals
Suitable	Unsuitable	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	
.82	.13	1.98	1.14	.46	.23	.02	3.99	4.87	2.71	1.34	.03	17.72

Grade A.				Grade B.				Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
8.56	20.17	3.64	.65	6.20	20.93	4.67	1.39	2.06	8.68	1.37	.38	78.70

Ungraded Carcases.						
Under Grade A measurements. U.L.	Over Grade C measurements U.F.	Wholly condemned U1.	Wholly black, injured or damaged U2.	Overweights, boars, sows, etc. X.	Partly Black Y.	
.04	2.29	.03	.42	.74	.06	3.58
					Total	100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

During October the volume of trade in pig carcases was again larger. The average price per head was 3/- dearer on the month at £5 9s. 10d., and the average price per cwt. rose by 8d. to £3 5s. 0d. Carcases were 4 lbs. heavier at an average dead weight of c.1. 2q. 22lb.

The following table gives the percentage results of an analysis of the purchase and grading statement furnished by Wiltshire Bacon Curers in respect of live pigs delivered on direct contract by producers during the month of October, 1937.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable U.L. or U.F.	Total
Under c.1.0.0 ..				—	.12
c.1.0.0 to c.1.0.20 ..				—	1.19
c.1.0.21 to c.1.2.3 ..	44.13	34.05	7.83	2.43	88.44
	Grade A.	Grade B.	Grade C.		
c.1.2.4 to c.1.2.7 ..	1.01	2.13	1.42	. 18	4.74
c.1.2.8 to c.1.3.14	1.07	2.25	1.48	.71	5.51
Over c.1.3.14 ..	—	—	—	—	—
				TOTAL	100.00

The average net price per cwt. in respect of these deliveries works out at £3 11s. 2d., after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight works out at c.1.1.18, the net average price per pig being £5 0s. 6d.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 20th November, was 10/1½d. This figure has been calculated by the Ministry from returns collected from 10 representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based:—

Maize Meal	...	...	30%
Barley Meal	...	...	30%
White Pollards	...	...	20%
White Bran	...	...	10%
Meat Meal (60% Protein)		...	10%

ELECTION OF MEMBERS TO THE PIGS MARKETING BOARD FOR THE COUNTIES OF ANTRIM, ARMAGH AND DOWN.

An election of members to the Pigs Marketing Board for the Counties of Antrim, Armagh and Down, will be held in the month of February, 1938, in accordance with the provisions of paragraph 6 of the Pigs Marketing Scheme (Northern Ireland), 1933. The number of candidates to be elected for each County is as follows:—

County	Antrim	... 3 members.
,,	Armagh	... 1 member.
,,	Down	... 2 members.

Candidates for election will require to be nominated in writing by two registered producers as proposer and seconder, and by at least eight other registered producers as assenting to the nomination. The proposer, seconder and each of the assentors, must reside within the administrative county for which a candidate is nominated, and their names must have appeared at the 1st November, 1937, on the register of producers. Nomination papers may be obtained from the Ministry, and when completed must be sent by registered post so as to reach the Secretary, Ministry of Agriculture, Stormont, Belfast, not later than the 20th January, 1938.

For the purpose of the election the electoral area will be the administrative county, and registered producers shall be entitled to vote only for those candidates nominated for the county in which the electors reside.

The election will be conducted by post, and not later than the 14th February, 1938, a voting paper will be sent to each person whose name appeared on the 1st November last on the register of producers for those administrative counties for which the election is being held. The voting papers, in order to count in the election, must be returned properly completed so as to reach the Ministry on or before the 28th February, 1938.

MILK AND MILK PRODUCTS ACTS (N.I.) 1934, 1936 AND 1937.

ELECTION OF MEMBERS TO THE JOINT MILK COUNCIL, DECEMBER, 1937.

The second election of members to the Joint Milk Council was held in accordance with the Regulations in December, 1937. The number of members to be elected was 7 by holders of Producers' licences and 4 by holders of Distributors' licences in respect of the several Electoral Areas as prescribed by the Regulations governing the election, made under the Milk and Milk Products Act (Northern Ireland), 1934.

The number of candidates nominated by producers for the Electoral Divisions of the Administrative County of Antrim, the County Borough of Belfast and the Administrative County of Down, and the County Borough of Londonderry and the Administrative County of Londonderry, and by holders of Distributors' licences for Electoral Divisions I. and III. was equal to the number of persons to be elected in those Electoral Areas. The candidates nominated for these Areas were, therefore, declared elected in accordance with the provisions of the Regulations.

As the number of candidates nominated by holders of Producers' licences for the Electoral Area of the Administrative Counties of Armagh, Fermanagh, and Tyrone, and by holders of Distributors' licences for the Electoral Division II. was greater than the number of persons to be elected, it was necessary to hold an election to decide the members of the Council. This election was held in the present month and the result of the count, which was made on Monday, the 13th December, 1937, was as follows:—

By holders of Producers' licences in the Administrative Counties of Armagh, Fermanagh, and Tyrone:—

1. Robert Stevenson,
   Ballylaw,
   Artigarvan,
   Strabane, Co. Tyrone. .. .. 1,868 Votes.
2. Matthew John Wauchob, J.P.,
   Laraghs,
   Newtownstewart, Co. Tyrone. .. .. 1,825 Votes.
3. Michael McGurk, R.D.C.,
   Killeenan,
   Cookstown, Co. Tyrone. .. .. 595 Votes.

In all 2,227 papers were returned, and of these 2,209 were admitted to count, the remaining 18 papers being disqualified by reason of the fact that they were not completed in accordance with the Regulations.

By holders of Distributors' licences:—

1. Archibald Robinson Erskine,
   6, Bentinck Street,
   Belfast. .. .. .. 1,462,764 Votes.
2. Robert Bradford,
   69/71, Ballycarry Street,
   Belfast. .. .. .. 588,246 Votes.
3. James McCullough,
   23, Frank Street,
   Belfast. .. .. .. 238,876 Votes.

243 papers were received, of which 236 papers were admitted to the count, the remaining 7 papers being disqualified by reason of the fact that they were not completed in accordance with the Regulations. As a result of the election the following is the constitution of the new Milk Council as elected by holders of Producers' and Distributors' licences:—

(a) by holders of Producers' Licences :—

The Administrative County of Antrim. (2 members.)

*Edward Greenlees, Gravel Hill, Carnmoney, Co. Antrim.
*George Thompson, J.P., Kiln Burn, Dundrod, Crumlin, Co. Antrim.

The County Borough of Belfast and the Administrative County of Down. (2 members.)

*John McCune, Ballybeen House, Comber, Co. Down.
*David Wright, J.P., The Moat, Dundonald, Co. Down.

The County Borough of Londonderry and the Administrative County of Londonderry. (1 member.)

*William John McElroy, Rossdowney, Londonderry.

The Administrative Counties of Armagh, Fermanagh, and Tyrone. (2 members.)

Robert Stevenson, Ballylaw, Artigarvan, Strabane, Co. Tyrone.
Matthew John Wauchob, J.P., Laraghs, Newtownstewart, Co. Tyrone.

(b) by holders of Distributor's Licences :—

Electoral Division I. (2 members.)

*Thomas Dobson, 195-203, Beersbridge Road, Belfast.
*John Emerson McKelvey, 20, York Street, Belfast.

Electoral Division II. (1 member.)

Archibald Robinson Erskine, 6, Bentinck Street, Belfast.

Electoral Division III. (1 member.)

*John Dickson, 1-3, Evelyn Avenue, Belfast.

The members marked with an asterisk were returned unopposed.

In addition to the above-mentioned persons elected by holders of Producers' and Distributors' licences, 3 members have to be appointed by the Minister of Agriculture and 3 members by the Minister of Home Affairs.

BONUS AND EQUALISATION PAYMENTS.

The bonus payment to be made to Grade C. producers who supply milk to creameries for manufacturing purposes, will be increased from 1d. per gallon to 2d. per gallon, in accordance with Section III. of the 1937 Act. This increase will take effect as from the 10th November, 1937, which is the day after that on which the Act became law.

Grade C. creamery suppliers will be paid bonus for November, 1937, at the rate of 1d. per gallon from the 1st to 9th November inclusive, and 2d. from the 10th to 30th November inclusive. Arrangements are being made by the Ministry to obtain directly from creameries details of the gallonage supplied during each period and, as suppliers will not be required to furnish any information additional to that normally supplied in their Monthly Returns, it is not anticipated that they will suffer any inconvenience in regard to the returns for November.

In addition to the increase in bonus payment, which applies to milk delivered for manufacture throughout the year, the Act also authorises the Ministry to increase equalisation payments to bring the Northern Ireland average price for milk delivered to creameries to 6½d. per gallon in respect of the winter months. This provision is being brought into operation with effect also from the 10th November, 1937. Creamery suppliers will, accordingly, receive equalisation payments on the basis of an average price of 6d. per gallon from the 1st to 9th November inclusive, and 6½d. per gallon from the 10th November until the 31st March next, when the summer price of 5d. per gallon becomes operative.

The effect of these two increases will be that licensed suppliers will obtain an average of 7d. per gallon for their milk during the summer months, and 8½d. per gallon during the winter months.

The Ministry anticipates that the increase from 1d. to 2d. per gallon in bonus to Grade C. suppliers will result in inducing a considerable number of unlicensed creamery suppliers to take out licences under the Milk Acts. The increased bonus and equalisation payments will also, it is anticipated, cause an increase in total milk supplies to creameries, particularly during the winter months, when the average price will in future be 1½d. more than during the summer period.

MARKETING OF EGGS ACTS (N.I.) 1924—1937.

WHOLESALE DEALERS' PRICES.

The following table shows the prices fixed by the Ministry, and payable by licensed wholesale dealers, for eggs purchased from producers during the following weeks ending on Saturday, compared with average prices at markets for the corresponding weeks of 1936.

Week ending	1937				1936			
	Hen Eggs per lb.*		Duck Eggs per dozen.*		Hen Eggs per lb.		Duck Eggs per dozen.	
	s.	d.	s.	d.	s.	d.	s.	d.
November 6th ..	1	2¾	1	5½	1	2¾	1	5
„ 13th ..	1	3	1	6	1	2	1	5½
„ 20th ..	1	3½	1	7	1	1¾	1	5½
„ 27th ..	1	4	1	7½	1	1¾	1	5½
December 4th ..	1	4½	1	8	1	1½	1	5

*Where hen eggs were delivered by the producer to the packing store of a licensed wholesale dealer of Class A an additional ½d. per lb. is payable; in the case of duck eggs an additional ¾d. is payable for each complete dozen so delivered.

RETAILERS' PRICES.

Since 11th October last arrangements have been in operation whereby all purchases of eggs by licensed wholesale dealers from producers must be made in accordance with prices determined each week by the Ministry of Agriculture, on the advice of the Egg Marketing Committee.

Rules have now been made by the Ministry extending these arrangements to purchases of eggs by retailers. These rules provide that for hen eggs purchased from producers, and delivered in any week, the same price shall be payable by holders of retailers' licences, who are not also licensed wholesale dealers, as are payable by licensed wholesale dealers. There are two important exceptions to this provision:

(1) Retailers, who are not also licensed wholesale dealers may, at their discretion, pay an extra 1d. per lb. for hen eggs delivered to them at their shops where eggs are sold by retail;

(2) Retailers, who are not also licensed wholesale dealers may, at their discretion, pay an extra ½d. per lb. for hen eggs delivered to them at premises in any market which the Ministry is satisfied were regularly occupied by them before 1st September, 1937, for the purpose of the purchase of eggs.

It is not proposed at present to prescribe any prices for duck eggs purchased by retailers who are not also licensed wholesale dealers.

Retailers who are also licensed wholesale dealers are required to pay the same price for all eggs purchased from producers, irrespective of whether they are purchased for re-sale by wholesale or retail. Retailers who are also wholesale dealers of Class A may pay ½d. extra per lb. for hen eggs, and ¾d.

extra per complete dozen for duck eggs, delivered to them at the registered premises used by them for the testing, grading and packing of eggs, but with these exceptions, no payments in addition to the prescribed standard prices may be made by holders of retailers' licenses who are also licensed wholesale dealers.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

The following is a summary of payments made under these Acts up to and including 27th November, 1937 :—

Live Weight.	Number of Animals	Total amount paid.
England and Wales	3,602,635	£8,520,336 13 1
Scotland	1,083,073	£2,678,578 5 4
Northern Ireland	383,549	£798,408 9 0
Total (United Kindgom)	5,069,257	£11,997,323 7 5
Dead Weight.		
England and Wales	117,800	£295,859 0 7
Scotland	34,345	£94,014 13 10
Total (Great Britain)	152,145	£389,873 14 5

NUMBERS CERTIFIED FOR SUBSIDY.

The numbers of fat cattle certified for payment of subsidy in the three months, August to October, 1937, have been as follows :—

	1937					Corresponding Totals in	
	Home-bred		Imported				
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade	Total	1936	1935
England	134,909	54,433	44,377	36,050	269,769	290,683	275,330
Wales	17,387	2,417	1,012	215	21,031	21,838	21,161
Scotland	15,104	36,035	4,847	20,064	76,050	84,617	79,795
Northern Ireland ..	19,060	822	3,040	259	23,181	32,376	34,027
United Kingdom ..	186,460	93,707	53,276	56,588	390,031	429,514	410,313

The average prices per live cwt. of certified cattle in the three months August to October, 1937, have been:—

	1937			Corresponding Averages in	
	Ordinary Grade	Quality Grade	Average	1936	1935
	s. d.	s. d.	s. d.	s. d.	s. d.
England ..	38 8	41 5	39 10	—	—
Wales	37 8	40 7	38 4	—	—
England and Wales ..	38 7	41 5	39 8	34 7	32 5
Scotland	40 4	45 8	44 7	38 1	35 6
Northern Ireland	37 6	39 10	37 10	31 7	28 5
United Kingdom	38 7	43 0	40 7	35 1	32 9

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

Pasture Improvement.—Farmers contemplating the improvement of pasture and of the fertility of the land by the application of lime and of phosphatic manures should make an effort to carry out this work as soon as possible. These materials are best applied to pasture during the dormant season after the grass has been well eaten off. Where there is a mat of fog or of old undecayed vegetation, the pasture should be well harrowed before liming or manuring is carried out, if full benefits are to be obtained. In cases where a very heavy mat of ungrazed grass has been allowed to remain it may even be necessary to mow this off before attempting the harrowing. There are several types of harrows on the market specially designed for pasture cultivation, but if one of these is not available, or cannot be obtained, an ordinary straight-tined, zig-zag type of harrow is quite suitable for this work. The harrow tines should, however, be freshly sharpened before the work is commenced and kept sharp. Harrowing should be done both in lengthwise and crosswise directions so that the surface of the pasture is thoroughly torn up. No injury to the pasture need be feared, even if the surface of the land presents a red appearance after harrowing; in fact this is the ideal condition to be aimed at, as such cultivation facilitates the thorough incorporation of the lime and phosphatic manure with the soil.

As indicated in last month's Report, a suitable dressing of lime for pasture is from 1 to 2 tons burnt lime per statute acre. Ground limestone is also suitable for application to pasture, but it should be noted that approximately 36 cwt. of ground limestone is required to supply the equivalent of 1 ton of burnt lime. Ground limestone is slower in action than burnt lime, but its chief advantage is that it can be applied by sowing by hand or by means of a manure distributor. Full particulars regarding the liming of land are given in a new leaflet No. 84 entitled: "Lime and Liming", supplies of which are now available.

Where it is intended to apply both lime and phosphatic manure to grass-land it is better to apply the phosphate the year before applying the lime, rather than to apply both during the same season or the lime one year and the phosphate the following year. In general, therefore, lime should be applied now to pastures which have received phosphates in past years, and phosphates should be applied to those pasture fields which are to be limed next year. This is particularly desirable if Gafsa rock phosphate is to be used, because this phosphate will not give as good results in the presence of lime as it will without it.

Suitable phosphatic manures for application to pasture land are high grade basic slag, Gafsa rock phosphate and Semsol. One or other of these manures should be applied at the rate of from 6 to 8 cwt. per statute acre. It should be noted, however, that the provisions of the Land Fertility Scheme apply only to British basic slag, and that no subsidy will be paid in respect of Gafsa rock phosphate or of Semsol. At present prices, however, the unit price of phosphoric acid in Gafsa rock phosphate is lower than that in basic slag, and on most soils, particularly those of the lighter types, the former manure will give very satisfactory results. Accordingly, where supplies of basic slag are difficult to obtain, farmers need have no hesitation in applying Gafsa rock phosphate or Semsol as substitutes, particularly to pastures on the lighter classes of soils. In the case of such soils, it is necessary to apply a dressing of potash in addition to the phosphate to obtain best results. An application of 1 cwt. 30 per cent. potash salts per acre is suitable for this purpose. It is emphasised again that where a mat of grass exists on the field to be limed or manured, this mat must be torn off before the application is made.

Ploughing.—The ploughing of stubble ground still unfinished should be pushed forward at every opportunity when soil conditions permit so that if at all possible this work may be completed before the New Year. It is not too early to plough lea ground so that when the stubbles are not dry enough to permit of ploughing being done, the plough can be kept going on the leas. It is an advantage to use a skim coulter when ploughing lea ground, particularly where there is a mat of old grass on the surface.

Sowing of Wheat.—There is still time to sow autumn varieties of wheat, but this work should be carried out immediately if crops which will ripen in good time are to be obtained. Squarehead's Master, Queen Wilhelmina and Victor are suitable varieties to sow now and have given good yields in trials carried out in Northern Ireland. A seeding at the rate of from 14 to 16 stones per statute acre should be given and it is a wise plan, particularly in the case of late-sown crops, to dress the seed before sowing with "Ceresan" or "Agrosan G" at the rate of from 5 to 8 ounces per cwt. of seed. Dressing the seed with one or other of these materials aids in the production of more vigorous and thicker brairds and often leads to heavier yields being obtained.

Potatoes.—The results of the potato variety trials carried out by the Agricultural Instructors are given on page 430 of this Report. Seed of some of the newer varieties mentioned in the report on the trials is still available, and farmers desiring to obtain supplies of these and of other varieties should place orders without delay. Lists giving the names and addresses of growers of some of the varieties mentioned, along with those having other varieties which have also been certified by the Ministry, can be obtained free, on request.

Application of Lime to Potato and Turnip Ground—The best place in the rotation of crops in which to apply lime is before the last corn crop, so that if, as is usual, this follows the potato and roots "break", the lime should be applied to ground from which the potatoes and roots have been harvested. It has been noted that while many farmers are applying lime to the land which grew potatoes this year, they are making the grave mistake of doing so **before** the ground has been ploughed. Lime sinks in soils of its own accord and soon falls below the reach of the roots of plants. If, therefore, it is ploughed down, it will be out of the plants' reach even sooner than need be. Lime should always be applied to such land after it is ploughed, and not before ploughing.

Drainage.—When slack periods occur at this time, labour can be usefully employed in attending to land in need of drainage. The cleaning out of ditches and the removal of obstructions from choked drain outfalls will do much to improve existing conditions, but the construction of a proper system of drains is the most satisfactory method of improving water-logged areas. On such land, liming should also be carried out after drainage work has been completed. Farmers contemplating the draining of land are reminded that the Ministry has a scheme in operation under which financial assistance is given for the carrying out of approved drainage and other land improvement works. Full particulars regarding this Scheme are given on page 436.

Forestry.—The planting of forest trees, either for the provision of shelter belts or for timber production, may be carried out from now onwards when soil conditions are suitable. Full particulars regarding suitable species of trees and methods of planting are given in Leaflets Nos. 62 and 72. Supplies of young trees of various species can be obtained by farmers from the Ministry's nurseries in lots of 1,000 or more at the reduced price of 30/- per 1,000. Copies of the scheme and of application forms will be sent free, on request.

SEASONAL LIVESTOCK NOTES.

Cattle.—The importance of providing suitable and economical rations for stock during the winter period may again be stressed. To assist feeders in compounding suitable rations, examples of economical meal mixtures which were given in last month's Report are repeated on page 428 of this issue.

Care of Bulls.—Good feeding and proper management of bulls kept for breeding are necessary at all seasons, particularly throughout the winter to keep the animals in hard breeding condition and thus to maintain their fruitfulness. Daily exercise in the open air is the first essential in maintaining bulls in an active condition, and where the bull is kept housed, a walk of at least half a mile should be given daily.

A suitable daily ration for a yearling stock bull in winter is about 4 stones of roots, 6 lb. cake and meals and as much hay as is eaten. For older bulls, slightly increased quantities of these foods may be necessary, but the tendency of older animals to get heavy and over fat should not be overlooked, and the feeding regulated accordingly. A suitable mixture of cake and meals for breeding bulls is equal parts crushed oats, maize meal, bran and linseed cake.

During the winter months, bulls should be groomed daily with a curry comb and brush. Grooming stimulates the circulation of the blood and aids in food digestion and in the maintenance of good health. A periodical application of a non-poisonous disinfectant to the animal's coat is also necessary as a preventive against lice. Lice may be destroyed by giving two or three applications, at weekly or ten-day intervals of a 5 per cent. solution (1 part in 20 parts water) of Jeyes' Fluid, or of a carbolic sheep dip. Further information on the feeding and management of bulls is given in Leaflet No. 61.

Sheep.—To get good lambing results it is essential to maintain the breeding sheep in a fit condition from now onwards. As a supplement to the grass, a small allowance of a mixture of concentrates, such as equal parts oats, decorticated earthnut cake and bran, along with a few turnips daily, should be given. The feeding of too large a quantity of turnips to in-lamb ewes should, however, be avoided, as should the feeding of frosted roots. It is also beneficial to allow the flock access to a supply of rock salt.

In addition to suitable feeding, diseases, such as liver fluke and footrot should be guarded against, if profitable results are to be obtained from the flock. Full particulars regarding the control of liver fluke disease are given in Leaflet No. 24, and of the prevention and treatment of footrot in Leaflet No. 63.

Housing of Young Pigs.—Good warm housing accommodation for pigs, particularly for sows and litters, is essential during the winter months, if satisfactory growth is to be made and losses kept to the minimum. Recent investigations have shown that unsuitable housing is responsible for many of the troubles and losses experienced in pig rearing.

Pigs are more susceptible to changes of temperature than other domesticated animals and it is important, therefore, that the temperature of the house should be maintained as uniformly as possible. It is difficult to maintain an even temperature in houses which are constructed of concrete and have corrugated iron roofs. As an aid in maintaining a more even temperature in houses so constructed, the roofs should be sheeted inside, or if pen divisions are present, a hoarding of boards, placed on the tops of the divisions and

covering the sleeping quarters in the pens will help to make the house warmer and more comfortable. It is also a good plan to provide a wooden platform in the house on which the sow and young pigs may lie. The house should be kept in a clean dry condition always, as damp, dirty houses are conducive to outbreaks of chills and pneumonia, and also to the spread and bad effects of worms and other parasites, since these pests, if they attack pigs which are in a low state of health, will rarely be amenable to treatment and will likely prove fatal.

SEASONAL GARDEN AND ORCHARD NOTES.

Planting Fruit Trees and Bushes.—The planting of fruit trees and bushes may still be undertaken whenever the soil is in a moderately dry state. It is important to make the holes of sufficient size to accommodate the roots of the trees without having to twist or bend any of them. Too much care cannot be taken in getting the soil well sifted through the roots at planting time as new feeding roots can only be formed on the fine roots when these are in close contact with the soil. As the soil is filled in over the roots it should be trodden firmly, but care taken to avoid damaging the roots when doing so. When the filled in soil has settled down, the trees should be staked securely and pruned hard back.

Pruning.—The work of pruning established trees should be pushed on whenever the weather is suitable. Tall trees and those overcrowded with branches are difficult to spray properly and require a greater quantity of the spray fluid than trees of moderate height and whose branches are well thinned out. The removal of crossing and diseased branches and the shortening back of weak growths is an important operation in the production of large, clean fruit. Some of the highest branches should be shortened back to a fork or to a large spur. Where the spurs are overcrowded some of these should be cut clean out. Where cuts of over an inch in diameter have to be made, a fine-toothed saw should be used, and in every case the cut should be made close to the branch or spur that is to be retained. If short stubs or "snags" are left, these are liable either to give rise to a number of strong growths which upset the fruiting of the tree, or to die back and thus lead to decay in the permanent branches. All cuts over an inch in diameter should be painted with a good, quickly drying paint. The following makes a very suitable preparation:—To 2 lbs. of white lead paste as bought add two teaspoonsful of paste driers and two tablespoonsful of raw linseed oil; stir till thoroughly mixed, then add two tablespoonsful of turpentine and mix well.

Full particulars of the pruning of apple trees are given in Leaflet No. **34**.

Spraying Fruit Trees.—Suplies of tar-oil and of mineral oil washes should be obtained without delay so that the work of spraying fruit trees may be undertaken on all favourable occasions. Supplies of tar-oils should be protected from frost during storage and the spraying of tar-oil washes should not be undertaken during frosty weather.

The spraying of plum and damson trees and apple trees of the varieties Beauty of Bath, Grenadier, and Newton Wonder with tar-oil spray should be completed before the middle of January. If done after that time there is a danger of damage being caused to the buds.

Manuring Apple Trees.—If apple orchards have not already been manured as recommended in last month's notes, this work should be attended to without delay. Most apple orchards in Northern Ireland would benefit considerably from a dressing of potash applied at the rate of from 2 to 3 cwts of sulphate of potash per acre. Lime, though not a manure, will improve the tilth of the soil and the growth of the grass and clover under the trees and for this reason may be of benefit to many orchards.

Supplies of Seeds.—A list of the quantity of seeds required for the coming season should be made out and the order for them dispatched without delay.

General Work.—Ditches and open drains should be cleaned and the outlets of drains attended to so that these may function properly during the winter. Any ground that requires draining should be attended to now. The most satisfactory type of drain for the garden and orchard is the tile drain, and if properly laid should not require much attention for many years, provided that the outlet is kept free of obstruction.

Any ground that is vacant should be dug or trenched as soon as possible after it becomes vacant as the longer the soil is turned up to the beneficial influence of the weather the easier will it break down in the spring.

Rhubarb.—If not already done, rhubarb crowns that were lifted, as advised in last month's notes, should be put into a dark corner of a warm building covered with fine soil or leaf mould and given a good soaking of water after which they should be covered and kept moist until the stalks are fit for use. If desired, another batch of crowns for succession may be lifted, left exposed to the frost for some days, and then treated as advised above.

Hot-Beds.—A quantity of fallen leaves from the deciduous trees and fresh strawy manure from the stable should be collected now for the preparation of the hot-bed. The proportion of leaves to litter should be in the ratio of 1 to 4. The materials should be well mixed and turned once per week until

some 4 or 5 turnings have been given. The material is then ready for making into a hot-bed which is extremely useful for the growing of plants such as cauliflower, lettuce, brussels sprouts, onions, etc., which need either to be started early to get an early crop or else need a long season in which to mature properly in this climate.

Celery, Parsley.—These crops should be covered at night when spells of severe weather during the next few weeks may occur so as to prolong the growing period.

SEASONAL POULTRY-KEEPING NOTES.

Laying Flock.—Pullets which have been in lay throughout the autumn are very liable to moult at this season, if they are allowed to become low in condition, are overcrowded in the house, are infested with parasites, or are exposed to cold winds. Good feeding and shelter from cold winds will assist in preventing moulting as will roomy, well-ventilated and clean houses. During cold wet days the birds should be kept indoors if good shelter outside is not available, and the house should be large enough to permit of this being done. Clean, fresh litter should also be regularly provided to encourage the birds to scratch freely through it, and thereby obtain exercise. Overcrowding is being practised if each bird in the house has an allowance of less than 2 square feet of floor.

It is also important to ensure that the birds consume sufficient mash during the short winter days and, accordingly, the proportion of grain to mash fed should be watched carefully. If excess grain is given early in the day, the birds will not eat sufficient mash, and subsequent moulting, with cessation of egg production, may be induced. A small feed of grain in the morning, scattered in the litter, and a further allowance of grain just before the birds go to roost in the evening, should be adequate. A daily feed of wet mash should be given about mid-day, while the dry mash hoppers should be left open at all times. See Leaflet No. 3 for more detailed particulars of the proper method of feeding laying birds.

Insect Pests.—Infestations of insect pests, such as lice and red mite are common causes of moulting and a continual watch should be kept for the presence of these pests. When red mites are found to be present the house should be thoroughly cleaned out, particular attention being paid to corners, crevices, perch sockets, etc., as it is in such places that these pests usually hide. Lice can be conveniently destroyed by painting the tops of the perches with nicotine sulphate about half an hour before the birds go to roost in the evening. Nicotine sulphate can be obtained from any chemist. Red mites can be destroyed by applying a dressing of creosote to the interior of the house. An application of paraffin oil, or of limewash to which some paraffin has been added, is also effective.

Hatching.—The hatching of eggs of general purpose breeds of poultry can be proceeded with from now onwards to obtain pullets which will start laying at the end of next summer, and cockerels for breeding or for sale as early table chickens.

Feeding and Management of Breeding Stock.—Good hatching results cannot be obtained unless the parent stock birds are fed and managed properly. In feeding breeding stock the aim should be to keep the birds in a fit, healthy condition, rather than to force them to lay too heavily. The mash given on page 430 is suitable for breeding stock. If milk is available, its inclusion in the mash in place of fish meal or meat meal is recommended, as milk is a valuable aid in keeping the birds in a fit condition. The addition of about 1 quart of good quality cod liver oil to each cwt. of mash is also recommended as it aids in improving fertility and hatchability. The grain ration for the breeding stock should contain some wheat and cracked maize as well as oats.

Breeding stock should always have facilities for obtaining adequate exercise. The free range system is ideal and, where possible the birds should be allowed to range at liberty. To encourage this, birds should be housed in small portable houses, which are moved frequently to fresh sites on clean pasture. Good feeding and good range are important aids in obtaining satisfactory fertility, good hatching, and hardy, easily-reared chicks. Further information on the feeding and management of poultry breeding stock is given in Leaflet No. 83.

Selection of Eggs for Hatching.—The selection of eggs to be used for hatching should receive particular attention. Eggs which are less than 2 ounces in weight should not be set, nor should those which are badly shaped or which have thin shells. Eggs for hatching should be set as soon as possible after being laid, as stale eggs seldom give satisfactory hatching results. Hatching eggs which are dirty should on no account be washed, but should be merely wiped with a damp cloth.

Purchase of Eggs for Hatching.—When purchasing eggs for hatching it is of the utmost importance to ensure that they are from birds which are free from Bacillary White Diarrhoea disease, otherwise there is a danger of that disease appearing in the chicks with disastrous results. The most progressive poultry keepers have their birds tested to ensure freedom from Bacillary White Diarrhoea, and, accordingly, there is now no difficulty in obtaining supplies of hatching eggs from stock which is free from the disease.

Readers are reminded that hatching eggs from blood-tested stock can be obtained from Accredited Poultry Farms and County Poultry Stations. Lists, giving the names and addresses of owners of Accredited Poultry Farms can

be obtained free, on request, from the Ministry. Lists of holders of Poultry Stations can be obtained from the Secretary of the Committee of Agriculture for the County.

Poultry "Tonics" and "Salts"—It has come to the notice of the Ministry that in certain districts in Northern Ireland substances described as "Poultry Tonics" and "Poultry Salts" are being sold at high prices, and that fantastic claims are being made regarding the results obtainable from the use of these materials. As the prices charged for such materials are far in excess of their true value, poultry-keepers are warned against purchasing these or other similarly described commodities for their poultry. The use of such condiments, particularly in view of the exorbitant prices charged for them cannot, under any consideration be justified. Where poultry or other stock are fed on good plain, wholesome rations, which are properly balanced as regards protein and starchy materials, there is generally no necessity to use any condiment, conditioner, or such like commodity; to do so only adds unnecessary expense to the cost of feeding and reduces profits accordingly. Stock feeders of all kinds of stock are strongly advised to consult the Instructor in Agriculture or, in the case of poultry condiments, the Instructor in Poultry-keeping before agreeing to purchase any of these patent proprietary materials which are offered at very high prices and claimed to be able to work miracles.

WINTER RATIONS FOR STOCK-FEEDING.

At current prices of feeding stuffs the following are economical meal mixtures for feeding to different classes of farm stock. Where supplies of separated milk, skim milk or buttermilk are available the protein-irch foods, i.e. soya bean meal, meat meal and fish meal, and the mineral mixtures may be omitted from the rations for pigs and poultry.

For Dairy Cows

(1) 3 parts crushed oats
2 parts maize meal
1 part red bran
2½ parts decorticated cotton cake or
2 parts decorticated earthnut cake
With 3 lb. mineral mixture (equal parts ground limestone or chalk, steamed bone flour and common salt) to each cwt. of meal mixture.

(2) 2 parts crushed oats
2 parts bean meal
1 part coarsely ground wheat
1¼ parts decorticated cotton cake
with mineral mixture as for (1).

(3) 2 parts maize meal
1 part pollard
1 part bran
1½ parts decorticated cotton cake or
1¼ parts soya bean meal
with mineral mixture as for (1).

For Fattening Cattle

2 parts crushed oats
2 parts maize meal
1 part decorticated earthnut cake
with 2 lb. mineral mixture (3 parts ground limestone, 1 part common salt) to each cwt. meal mixture.

For Young Growing Cattle

2 parts crushed oats
1 part maize meal
1 part decorticated earthnut cake
with similar mineral mixture as for fattening cattle.

For Fattening Pigs

(1) 2 parts barley meal
2 parts maize meal
2 parts pollard
1 part flaked maize
1 part bran
1 part soya bean meal
with similar mineral mixture as for fattening cattle.

(2) 3 parts barley meal
3 parts maize meal
2 parts pollard
1 part bran
1 part meat meal
with 1 lb. mineral mixture as above to each cwt. meal mixture.

For Sows with Litters

3 parts maize meal
1 part flaked maize
2 parts red bran
2½ parts brown pollard
1½ parts high grade meat meal
with from 1 to 2 lb. mineral mixture as above to each cwt. meal mixture.

For In-pig Sows

4 parts maize meal
4 parts brown pollard
2 parts red bran
with 1 lb. mineral mixture to each cwt. meal mixture.

For Young Chickens

4 parts bran
2 parts sharps (fine pollard)
1 part Sussex ground oats
1 part maize meal
1 part fish meal (60 per cent. protein).

For Growing Birds

3 parts bran
4 parts sharps
2 parts Sussex ground oats
1 part maize meal
½ part fish meal, or meat meal.

For Laying Pullets

(1) 4 parts pollard
2 parts bran
2 parts maize meal
1 part Sussex ground oats
1 part fish meal (60 per cent. protein).

(2) 4 parts pollard
2 parts bran
2 parts maize meal
1 part Sussex ground oats
½ part fish meal
¾ part soya bean meal
with ½ lb. common salt per cwt. meal mixture.

For Breeding Stock

3 parts bran
2 parts pollard
2 parts coarsely ground wheat
2 parts maize meal
1 part fish meal or meat meal or milk
with 1 pint cod-liver oil to each 4 stones of mash.

RESULTS OF POTATO VARIETY EXPERIMENTS, 1937.

As in previous years, experiments, to ascertain the cropping capabilities and suitability of some of the newer varieties of potatoes, as compared with some of the older and proved kinds, were again carried out during the past season by the Agricultural Instructors. Two series of tests were carried out, one with early and the other with main crop varieties.

EARLY VARIETIES.—Seven early varieties were prescribed for testing, and the average results obtained from 6 centres where all the varieties were grown are given in the following table. For comparison purposes the average total yields obtained from the three previous years' trials are also included along with the true average total yield of the four years' tests:

Table 1. Average Yields per Statute Acre.

Variety.	1937 (6 centres)				1934–1936 (25 centres)	1934–1937 (31 centres)
	Ware	Seed	Chats and Diseased	Total	True Average Total Yield	True Average Total Yield
	T. c.	T. c.	T. c.	T. c.	T. c.	T. c.
Dunbar Yeoman ..	8 1	1 12	– 8	10 1	12 2	11 15
Arran Pilot ..	7 10	1 17	– 17	10 4	12 1	11 14
British Queen ..	4 17	3 9	1 16	10 2	11 13	11 7
Ballydoon ..	6 16	2 2	– 12	9 10	11 11	11 3
Di Vernon ..	6 8	3 0	1 15	11 3	10 17	10 18
May Queen ..	6 18	1 19	– 10	9 7	10 10	10 6
Ulster Monarch ..	7 17	1 14	– 10	10 1	—	—

It will be observed that the varieties Dunbar Yeoman and Arran Pilot gave almost identical yields when the true average total yields of the four years' tests are considered. The tubers of Dunbar Yeoman have lemon coloured flesh, and are of good eating quality. Arran Pilot is one of the earliest varieties of the May Queen type. The tubers are plump and long shaped, and are very suitable for meeting the requirements of the English market.

British Queen has given a slightly heavier average yield than Ballydoon in the 1937 trials, but it should be noted that the average yield of ware-sized tubers from the latter variety exceeded those obtained from British Queen by almost 2 tons per acre. When the true average total yield in respect of the four years' trials are considered Ballydoon gave almost as good results as British Queen. Ballydoon is an immune variety which can be used to replace the non-immune British Queen variety. It matures earlier than British Queen.

The new variety Ulster Monarch was included in these trials for the first time in 1937. It has given a very satisfactory yield. As regards maturity, Ulster Monarch corresponds closely to British Queen. It produces an attractive and bold sample of kidney-shaped tubers of good cooking quality.

The yields in the above Table were obtained in July at the majority of the centres, but it is interesting to see the yields when the varieties were allowed to grow until maturity. For this purpose a portion of each plot was allowed to remain until growth was complete, when it was dug and the produce weighed. The following Table gives the average yields per statute acre obtained:

Table 2. Average Yields per Statute Acre.

Variety.	Ware. T.	c.	Seed. T.	c.	Chats. Cwt.	Diseased. Cwt.	Total. T.	c.
Ulster Monarch	12	1	1	9	12	6	14	8
British Queen	10	3	3	1	23	1	14	8
Di Vernon	9	14	2	15	29	2	14	0
Ballydoon	10	5	1	9	12	3	12	9
May Queen	9	16	1	6	10	3	11	15
Dunbar Yeoman ..	11	3	1	11	14	3	13	11
Arran Pilot	10	19	1	12	12	1	13	4

It will be noted that Ulster Monarch and British Queen gave similar average total yields and greater than the other varieties. Ulster Monarch has produced a heavier average yield of ware potatoes than British Queen.

Main Crop Varieties.—The tests with main crop varieties were carried out with eight varieties at 11 centres in 1937. Three new varieties, namely Dunbar Standard, Redskin and Arran Signet, were included in these trials for the first time. The average yields obtained along with the average total yields in the previous year's test are given in Table 3.

Table 3. Average Yields per Statute Acre.

Variety.	1937 (11 Centres)			1936 (10 Centres)	1936–37 (21 Centres)
	Saleable Ware and Seed.	Diseased.	Chats.	Total.	Total Yield.	True Average Total Yield.
	T. c.	Cwt.	Cwt.	T. c.	T. c.	T. c.
Majestic ..	14 16	4	15	15 15	14 2	14 19
Arran Victory ..	14 13	1	10	15 4	12 16	14 1
Up-to-date ..	14 3	13	16	15 12	12 7	14 1
Kerr's Pink ..	14 6	1	15	15 2	12 10	13 17
Gladstone ..	13 0	4	15	13 19	13 6	13 13
Dunbar Standard ..	14 17	2	11	15 10	—	—
Redskin ..	12 18	5	10	13 13	—	—
Arran Signet ..	12 16	5	11	13 12	—	—

As in previous years Majestic has again given the highest average total yield, but the new variety Dunbar Standard gave a slightly heavier yield of ware and seed, and less diseased and small-sized tubers, in the 1937 tests than did Majestic. Dunbar Standard matures about the same time as Up-to-date and produces tall erect foliage of the Kerr's Pink type, which provides good cover for the suppression of weeds. The tubers are white-skinned, of an attractive appearance, being in this respect superior even to Up-to-date. They are kidney in shape and of good cooking quality. Furthermore, this variety is fairly resistant to blight disease.

Gladstone, which was included in these trials for the first time in 1936, has again given a satisfactory yield. This is an early main-crop variety which produces white-skinned tubers with splashes of pink. The cooking quality is excellent. The tubers closely resemble those of the non-immune King Edward.

The other new varieties, namely Redskin and Arran Signet, have also yielded satisfactorily, although less heavy than some of the older varieties. The variety Redskin produces haulms of medium height and more open than that of Kerr's Pink. The tubers resemble those of Kerr's Pink both in colour and shape, but have shallower eyes. It is an early main crop. Arran Signet matures earlier than Majestic. The tubers of this variety are very suitable for the English market, as they are kidney-shaped and extremely symmetrical. The foliage is low and fairly close.

Further information and descriptive notes relating to the newer varieties of potatoes are given in Leaflet No. 7—Potato Trials. Lists giving the names and addresses of growers of some of the varieties mentioned in these trials whose crops have been inspected and certified by the Ministry and show a high degree of freedom from diseases, such as leaf roll and mosaic, can be obtained from the Ministry, free on request.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

Inspection of Bulls for Licences.—The inspection for licences of bulls which were born during the months of January, February, March, April, May, and June, 1937, will be carried out during January next. Applications for inspection for licences should be lodged with the Ministry immediately and not later than 31st December. Application forms may be obtained from the Ministry or from any Police Barracks.

Licensing of Boars.—Inspections for licences of boars farrowed in July, August, and September last will also be carried out early in January. Applications for inspections should be sent to the Ministry as soon as possible, but not later than 31st December.

Schools.—The next session at the Ulster Dairy School, Cookstown, and at the North West School, Strabane, begins on the 4th January, 1938. Further particulars regarding the courses of instruction provided at these schools are given on page 435.

Accredited Poultry Farms.—Lists giving the names and addresses of owners of Accredited Poultry Farms for the 1938 season have now been published and can be obtained free, on request, from the Ministry. Hatching eggs from stock which have all passed the test for Bacillary White Diarrhoea disease can be obtained from these farms.

County Poultry Stations.—Lists of holders of County Poultry Stations are also available now and can be obtained from the Secretary, Committee of Agriculture for the County. The birds on these Stations have also all passed the test for Bacillary White Diarrhoea.

Report of Fifteenth Egg Laying Test.—Copies of this report are now available and will be sent free to those applying for them. This report contains full particulars of the performances of the birds which competed at the test.

Supply of Forest Trees.—Farmers can now obtain supplies of young forest trees from the Ministry's nurseries at reduced prices, under the Forestry Scheme. Full particulars will be sent on request.

Land Fertility Scheme.—Lists, giving the names and addresses of approved suppliers and distributors of lime and basic slag under the Land Fertility Scheme, may be seen at Creameries, or at any Police Barracks.

Leaflets.—Copies of the Leaflets mentioned in this Report are obtainable free, on request.

LECTURES.

The following lectures have been arranged by County Committees of Agriculture :—

County.	Day and Date.	Centre.	Time.	Subject.
Fermanagh	Fri., 7th Jan.	Magheraveely P.E. School	7-30 p.m.	Land Fertility Scheme.
,,	Fri., 14th Jan.	Marble Arches P.E. School	,,	,,
Londonderry	Wed., 15th Dec.	Mayogall Hibernian Hall	7 p.m.	Poultry-keeping
,,	Thur., 16th Dec.	Aghadowey New P.E. School	,,	,,
,,	Fri., 17th Dec.	Ringsend P.E. School	,,	,,
,,	Mon., 10th Jan.	Killymallaght P.E. School	,,	,,
,,	Wed., 12th Jan.	Dunbrock P.E. School	,,	,,
,,	Fri., 14th Jan.	Burnfoot P.E. School	,,	,,
,,	Fri., 14th Jan.	Damhead Old P.E. School	,,	Land Fertility Scheme
,,	Mon., 17th Jan.	Enagh P.E. School	,,	Poultry-keeping
,,	Wed., 19th Jan.	Duncrum P.E. School	,,	,,
,,	Fri., 21st Jan.	Drumsurn P.E. School	,,	,,
,,	Fri., 21st Jan.	Culcrow P.E. School	,,	Land Fertility Scheme
,,	Mon., 24th Jan.	Ballywildrick P.E. School	,,	Poultry-keeping
,,	Wed., 26th Jan.	Killeague P.E. School	,,	,,
,,	Fri., 28th Jan.	Articlave P.E. School	,,	Land Fertility Scheme
Tyrone	Wed., 15th Dec.	Crilly Drill Hall	7-30 p.m.	Poultry Management
,,	Thur., 16th Dec.	Dooish P.E. School	7 p.m.	Land Fertility Scheme
,,	Fri., 17th Dec.	Drumduff P.E. School	,,	,,
,,	Fri., 17th Dec.	Galbally New Hall	,,	Laying down and Management of Pasture.
,,	Fri., 7th Jan.	Newtownsaville P.E. School	,,	Land Fertility Scheme
,,	Fri., 7th Jan.	Dunamore P.E. School	,,	,,
,,	Fri., 14th Jan.	Glencull P.E. School	,,	,,
,,	Fri., 21st Jan.	Aughadarragh P.E. School	,,	,,

SCHOOLS NEWS.

TRAINING OF GIRLS AT THE MINISTRY'S AGRICULTURAL SCHOOLS.

The next sessions at the North-West School, Strabane, and the Ulster Dairy School, Cookstown, will commence on the 4th January, and terminate on the 24th March, 1938. Early application for admission to either school is essential, as equally suitable candidates are admitted in the order in which their applications are received.

The North-West School provides a sound practical training in modern economical methods of dairying, poultry-keeping and rural housewifery. Scholarships tenable at the school, and covering the cost of tuition, board and residence, are awarded by each County Committee of Agriculture in Northern Ireland. Application for one of these scholarships should be made to the Secretary or Agricultural Organiser of the County Committee of Agriculture for the county in which the applicant resides. The minimum age for admission is 16 years.

The Ulster Dairy School provides a most up-to-date training in all matters connected with women's activities in farm life. Admission to this School is by Assisted Scholarships, which enable pupils to obtain board, residence and training for each of the three terms comprising the ordinary school course at the nominal inclusive fee of £3 3s. 0d. per term. The minimum age limit for admission to this school is 17 years, and applications should be directed to the Secretary, Ministry of Agriculture, Stormont, Belfast.

Prospectuses of both schools, containing forms of application for admission, can be obtained from the Ministry free of charge and post free.

SCHEME FOR IMPROVEMENT OF AGRICULTURAL HOLDINGS BY DRAINAGE AND OTHER WORKS AND FOR EXTENDING EMPLOYMENT IN RURAL AREAS.

This Scheme affords financial assistance in the form of grants to farmers, whose holdings do not exceed a Poor Law Valuation of £75, to enable them to carry out works of land improvement on their farms. It should be noted specially that grants are now given only to persons whose sole means of livelihood is derived from farming. Grants are made in respect of approved works such as drainage of agricultural land, improvement of ditches, watercourses and river and sea embankments, stubbing of whins, fencing and agricultural improvements of a like nature, construction of farm roads, land reclamation, construction and reconstruction of flax dams, and excavation of wells. Grants amount to three-fourths of the total amount paid in wages to unemployed workmen, who must be engaged specially for the work through an Employment Exchange. If required, loans may also be obtained to enable applicants to finance the remaining portion of the cost.

Full particulars of the Scheme, together with a copy of the prescribed form of application for grant, may be obtained on application to the Ministry of Agriculture, Stormont, Belfast.

SIXTEENTH EGG LAYING TEST AT STORMONT.

The second four-weekly period of the above test ended on the 25th November, 1937. There was a slight increase in egg-production with a marked increase in the number of scoring eggs laid. The total number of eggs laid was 8,448, which gives a flock average of 11.9 eggs per bird. Of this number 5,857 or 69.3 per cent. were scoring eggs (super grade and first grade), as compared with 52.7 per cent. for the previous period.

The highest sectional average egg-production for the period under review is to the credit of the White Wyandottes in Section 1, namely 13.8 eggs per bird, while the White Wyandottes in the Station-holders Section 5 (a) are a close second with an average of 13.1 eggs per bird.

Seven birds died during the period, bringing the total number of deaths to the end of eight weeks to 12. This represents a mortality rate of 1.7 per cent. as compared with 1.1 per cent. for the corresponding eight weeks of the previous test.

The following are particulars of the leading pens in each Section :—

SECTION 1. WHITE WYANDOTTES (OPEN). 22 PENS.

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	16	Mr. T. J. McMillan, Crossgar, Co. Down.	70	104	7	—	174
2	7	Lt.-Col. J. P. Galbraith, Clanabogan, Omagh, Co. Tyrone.	61	103	27	1	164
3	19	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down.	42	113	62	1	155
4	21	Mr. J. Stewart, 24 High Street, Ballymena, Co. Antrim.	22	126	44	3	148

SECTION 2. WHITE LEGHORNS (OPEN). 9 PENS.

1	26	Mr. T. J. McMillan, Crossgar, Co. Down.	37	86	26	—	123
2	31	Mr. J. O. Turkington, Derryinver, Lurgan, Co. Armagh.	49	46	11	1	95
3	28	Mrs. P. Rogan, Guiness, Dunmore, Ballynahinch, Co. Down.	17	60	79	2	77

SECTION 3. RHODE ISLAND REDS (OPEN). 26 PENS.

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	39	Mrs. H. Farr, Elsneuk, Dundrum Road, Newcastle, Co. Down.	136	55	7	1	191
2	49	Mrs. J. McNeill, Drain's Bay, Larne, Co. Antrim.	68	88	6	—	156
3	52	Mrs. G. S. Parker, Lakeside, Tullyveery, Killyleagh, Co. Down.	41	104	21	1	145
4	43	Mrs. E. E. Kennedy, Tullyreagh, Glarryford, Co. Antrim.	40	82	18	—	122

SECTION 4. ANY OTHER PURE BREED (OPEN). 15 PENS.

1	67	Mr. R. Holmes, Moneycarrie, Coleraine, Co. Londonderry. (Buff Rocks)	124	76	5	1	200
2	62	Mrs. M. Benson, Killymoon, Cookstown, Co. Tyrone. (Light Sussex)	39	102	25	3	141
3	68	Mr. R. Holmes, Moneycarrie, Coleraine, Co. Londonderry. (Buff Rocks)	38	99	18	3	137

SECTION 5(*a*). WHITE WYANDOTTES (STATIONHOLDERS). 9 PENS.

1	82	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	84	84	26	—	168
2	76	Miss A. Brown, Ballyhill, Crumlin, Co. Antrim.	45	106	89	1	151
3	81	Miss A. Peel, Aghadalgon, Roses Lane Ends, Belfast.	39	54	46	2	93

SECTION 5(*b*). WHITE LEGHORNS (STATIONHOLDERS). 7 PENS.

1	91	Miss I. J. Magill, Mulloughdrin, Dromara, Co. Down.	115	64	46	—	179
2	89	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim.	44	103	19	—	147
3	86	Mrs. J. Brown, Gorsebank, Culcrum, Co. Antrim.	18	79	40	—	97

SECTION 5(*c*). RHODE ISLAND REDS (STATIONHOLDERS). 18 PENS.

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.				Test Score.
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	102	Mrs. R. McGiffert, Rathcunningham, Toye, Co. Down.	59	128	19	—	187
2	93	Mrs. H. H. Dickson, Lower Coagh, Co. Tyrone.	43	124	18	1	167
3	104	Miss S. McKee, Ardmillen House, Killinchy, Co. Down.	18	148	59	2	166

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS. 12 PENS.

1	114	Ballywalter Young Farmers' Club, Co. Down. (Rhode Island Red.)	59	72	8	—	131
2	117	Crossgar Poultry Club, Co. Down. (Rhode Island Red.)	46	77	19	—	123
3	121	Garvagh Poultry Club, Co. Londonderry. (Rhode Island Red.)	52	38	16	27	90

"Test Score" means the total of the super grade and first grade eggs.

Pen No. 67 of Buff Rocks in Section 4 entered by Mr. Holmes, is still leading in the entire test. Mrs. Farr's pen of Rhode Island Reds in Section 3 now holds second place.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st December, 1937, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	s. d.	s d.	s. d.	s. d.	s. d.	s. d.	s. d.	s d.	s. d.	s. d.
PROTEIN FOODS :										
Linseed (whole)	12 6	16 0	16 0	16 0	19 6	20 0	18 0	17 0	20 0	16 0
Linseed Cake, home-made ..	—	12 6	12 0	12 0	11 3	—	12 6	11 9	12 0	—
Linseed Cake, foreign ..	10 6	11 6	10 9	11 0	—	12 0	11 3	10 9	11 0	10 6
Linseed Cake Meal	10 6	12 6	10 9	11 0	11 3	11 6	12 6	12 0	11 6	11 0
Cotton Cake, decorticated ..	10 0	—	9 6	10 6	10 3	10 0	10 6	10 9	—	10 6
Earthnut Cake, decorticated ..	11 3	—	9 6	9 6	—	10 3	10 9	11 0	10 0	10 3
Soya Bean Meal (extracted) ..	11 3	11 0	11 3	11 6	—	11 6	11 0	—	11 6	11 6
Fish Meal (60% protein) ..	17 0	16 0	16 0	16 0	—	16 6	16 6	16 6	16 6	16 6
Meat Meal (60% protein) ..	16 6	16 0	14 9	—	16 0	—	15 6	—	15 6	—
Meat and Bone Meal (40% protein)	—	11 6	11 0	10 0	—	12 0	11 9	11 6	—	12 0
MEDIUM PROTEIN FOODS :										
Palm Kernel Cake	9 3	—	9 9	7 9	—	8 6	—	—	10 0	—
Palm Kernel Meal	9 3	9 6	—	7 9	—	8 6	—	—	—	—
STARCHY FOODS :										
Maize (whole)	7 6	8 0	8 0	7 6	7 9	8 3	7 9	8 0	—	7 6
Maize Meal	8 3	8 3	8 0	8 0	8 3	8 3	8 3	8 3	8 0	8 0
Maize, Flaked	8 9	9 0	8 6	8 6	8 6	8 9	8 9	9 0	9 0	8 9
Wheat (whole)	11 0	10 6	10 9	10 6	11 6	12 0	11 0	—	—	9 3
Bran, Red	9 0	9 0	8 0	9 0	—	8 6	9 0	9 6	9 0	8 0
Bran, White	10 0	10 6	9 6	10 0	9 9	10 6	10 0	10 6	10 3	10 6
Pollard, Brown	9 0	9 0	8 9	9 0	—	9 0	9 0	9 6	9 0	8 0
Pollard, White	9 6	10 0	9 6	10 0	9 6	9 6	10 0	10 6	10 0	10 9
Barley Meal	10 0	10 6	9 6	10 0	9 6	10 0	10 0	—	10 0	11 6
Tapioca Root Flour	8 0	8 0	8 3	—	—	8 6	8 3	—	—	—
Oats (whole)	9 0	8 3	8 0	8 6	7 0	7 6	8 6	8 6	8 0	6 9
Crushed Oats	9 6	9 0	8 6	9 0	7 3	8 0	—	9 0	—	7 9

NON-CONCENTRATES :—The average prices at representative markets at the beginning of December, were as follows :— Potatoes (Main Crop), 2/6½d. per cwt. ; Upland Hay, 61/6d. per ton ; Meadow Hay, 45/- per ton ; Oat Straw, 42/8d. per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st December, 1937, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent, and of starch equivalent, are also given in respect of each month.

	Protein equivalent	Starch equivalent	Average price per cwt. at		Cost per unit of Protein equivalent		Cost per unit of starch equivalent	
			1st Dec.	1st Nov.	Dec.	Nov.	Dec.	Nov.
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d	s. d.
Linseed ..	19.0	119.0	17 1	17 3	18 0	18 2	2 10	2 11
Crushed linseed	19.0	119.0	18 10	18 8	19 10	19 8	3 2	3 2
Linseed cake (home-made)	25.0	72.0	12 0	11 7½	9 7	9 4	3 4	3 3
Linseed cake (foreign)	25.0	72.0	11 0	11 0	8 9	8 10	3 1	3 1
Linseed cake meal	25.0	72.0	11 5	11 3	9 2	9 0	3 2	3 2
Decorticated Cotton cake	35.0	71.0	10 3	10 2	5 10	5 10	2 11	2 11
Decorticated Earthnut cake	41.0	73.0	10 4	10 1	5 0	4 11	2 10	2 9
Extracted Soya Bean meal	38.0	64.0	11 4	*11 4	6 0	6 0	3 7	3 7
Fish meal (60% protein)	53.0	59.0	16 5	16 7	6 2	6 3	5 7	5 7
Meat meal (60% protein)	55.0	61.0	15 9	15 11	5 9	5 10	5 2	5 3
Meat & bone meal (40% protein)	36.0	44.0	11 5	11 9	6 4	6 6	5 2	5 4
Medium Protein Foods								
Palm kernel cake	17.0	75.0	9 1	9 1½	10 8	10 9	2 5	2 5
Palm kernel meal	17.0	75.0	8 9	9 2	10 4	10 10	2 4	2 6
Starchy Foods								
Maize	6.8	81.0	7 10	7 8	23 0	22 6½	1 11	1 11
Maize meal	6.8	81.0	8 2	8 0	24 0	23 6	2 0	2 0
Flaked maize	8.6	83.0	8 9	8 8	20 4	20 2	2 1	2 1
Wheat	9.6	72.0	10 10	11 3	22 7	23 5	3 0	3 2
Red bran	10.0	43.0	8 9	8 10	17 6	17 8	4 1	4 1
White bran	10.0	43.0	10 2	10 2	20 4	20 4	4 9	4 9
Brown pollard	11.0	60.0	8 11	9 0	16 3	16 5	3 0	3 0
White pollard	11.0	60.0	9 11	10 3	18 0	18 8	3 4	3 5
Barley meal	7.0	70.0	10 1	10 0	28 10	28 7	2 11	2 10
Oats	7.6	60.0	8 0	7 10	21 1	20 8	2 8	2 8
Crushed oats	7.6	60.0	8 6	8 7½	22 4	22 9	2 10	2 11
Tapioca root flour	1.0	83.5	8 3	8 6½	165 0	170 10	2 0	2 0
Non-Concentrates								
Potatoes	0.6	18.0	2 6½	2 8¾	84 9	90 3	2 10	3 0
Upland hay	4.9	24.0	3 1	3 1½	12 7	12 9	2 7	2 8
Meadow hay	4.6	31.0	2 3	2 3	9 9	9 9	1 6	1 6
Oat Straw	0.9	20.0	2 1½	2 1	47 5	46 4	2 1½	2 1

* It is regretted that through an oversight this figure was represented last month as 10/2, as a result of which the units of feeding values were also erroneously quoted as 5/4 and 3/3 respectively.

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately 2½ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk, and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ..	88	1	0.2	9
Potatoes ..	75	2	0.1	21
Cabbage ..	89	1.5	0.5	8
Oat Straw ..	14	4	2	37
Meadow hay ..	10	10	3	45
Pasture grass ..	80	3.5	0.8	10
Fattening Foods				
Crushed oats ..	13	9	6	60
Maize meal ..	12	10	4	70
Barley meal ..	13	12	2	66
Pollard ..	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake ..	9	40	9	26
Decorticated Earthnut cake ..	10	46	7	23
Meat meal ..	11	60	6	—
Soya bean meal ..	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) the quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the food-stuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given on the table on page 441, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 441 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	5/10d.
Decorticated earthnut cake	5/0d.
Soya bean meal	6/0d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Soya bean meal	6/0d.
Meat meal (60% protein)	5/9d.
Meat and bone meal (40% protein) ...	6/4d.

Therefore meat meal (60% protein) is the cheapest source of protein amongst the purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/4d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade, both from the thriving point of view and its effect on the quality of the bacon.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

PRICES OF FERTILISERS.

The following table shows the ranges of retail cash prices of fertilisers per ton at 1st December, 1937:—

		Cost of unit of fertilising ingredient at average of range of prices shown.		
Nitrogenous Manures	£ s. d. £ s. d.	Nitrogen.	Phos. Acid	Potash
Nitrate of Soda (15.5%N.)	8 0 0 to 8 10 0	10/7¾		
Sulphate of Ammonia (20.6%N.)	7 10 0 „ 9 0 0	8/–		
Nitro Chalk (15.5%N.)	7 15 0 „ 9 0 0	10/9¾		
Phosphatic Manures				
Superphosphate (16% S.P.A.)	£3 15 0		4/8¼	
Semsol (5% S.P.A. 15½% P.A.)	3 5 0 „ 4 0 0		3/6½	
*Basic Slag (18% P.A.)	3 14 0 „ 4 0 0		4/3¼	
Gafsa Rock Phosphate (26% P.A.)	2 15 0 „ 3 7 6		2/4¼	
Potash Manures				
Kainit (14% P.)	3 5 0 „ 3 10 0			4/9¾
Potash Salts (20% P.)	4 7 0 „ 4 10 0			4/5
Potash Salts (30% P.)	5 10 0 „ 5 13 0			3/8½
Muriate of Potash (50% P.)	8 10 0 „ 9 10 0			3/7¼
Agricultural Salt	1 5 0 „ 3 10 0			

Abbreviations:—N=Nitrogen. S.P.A.=Soluble Phosphoric Acid. P.A.=Phosphoric Acid P.=Potash.

*If obtained under the Land Fertility Scheme, the price of British-made basic slag will be 25 per cent. less than the figues given since a subsidy equivalent to one-quarter the purchase price is payable.

The cost of the unit of fertilising ingredient is determined by dividing the price per ton by the percentage of the ingredient contained in the manure, and this method of determining values is the only sound basis on which two different manures or two grades of the same manure supplying the same fertilising ingredient can be compared. The price per ton is not a reliable guide as to which is the better value for money. For example, in the table of prices it is seen that the average of the range of prices for 14% Kainit is £3 7s. 6d. per ton, and for 30% Potash Salts £5 11s. 6d. per ton, and it might be concluded that the Kainit was the better value for money. This is not so. The 30% Potash Salts contains more than twice as much potash as the Kainit, and is therefore a cheaper source of potash when the price is even double that at which the Kainit is offered. The cost of a unit of potash in the 30% Potash Salts is seen to be only 3/8½d., whereas the cost of a unit of potash in Kainit is 4/9¾d. At the prices ruling for these manures, 30% Potash Salts is therefore, better value for money than Kainit. Similarly, it is seen that at the prices prevailing Gafsa Rock Phosphate is the cheapest source of phosphoric acid and Sulphate of Ammonia is the cheapest source of nitrogen.

In connection with the costs of the units of phosphoric acid, as shown in the table on the previous page, it should be noted that in the case of Superphosphate, the cost is that of a unit of soluble phosphoric acid: whereas in the cases of Basic Slag, Semsol, and Gafsa Rock Phosphate, the figures represent the cost of a unit of insoluble phosphoric acid. It would not, therefore, be correct to compare the unit price of the phosphoric acid in Superphosphate with those of the phosphoric acid in the other three.

PRICES OF FAT STOCK.

The following were the average prices per live cwt. of bullocks and heifers sold at Belfast Auction Marts during each of the four weeks ended 30th November, 1937:—

Week ended.	Bullocks.		Heifers.	
	s.	d.	s.	d.
9th November ...	36	6	35	6
16th November ...	37	9	37	0
23rd November ...	38	3	37	9
30th November ...	38	0	37	9

Last month saw the trade for fat cattle at the Belfast Auction Marts make a gradual improvement. At the beginning supplies shortened, and a fair proportion were of good quality. The demand at the outset was quiet, but a livelier trade soon followed and sales were quickly made at firmer rates. This improvement continued at the next two sales, where offerings showed further slight decreases. At the close of the month the upward trend of prices attracted heavier supplies of cattle, most of which were below the usual standard of quality. Although a keen demand was maintained by shippers and local dealers, prices generally reflected the decline in quality. A feature of recent sales was the stronger enquiry for bullocks than for heifers.

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of November, 1937.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Feeding Lambs (under 12 months old)	Fat Lambs under 12 months old)	Young Pigs
					Cows	Heifers				
		Per head £ s.	Per cwt. Live weight.	Per cwt. Live wgt.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.
2	Omagh ..	6 15	38/– to 40/–	33/6	17 10	16 10	16 0	*1 17/6	—	—
3	Ballymoney ..	—	37/6 to 40/–	—	19 0	17 0	17 5	—	*1 5	1 13
3	Londonderry ..	—	29/– to 36/6	32/6	17 0	—	—	—	—	1 8
3	Rathfriland ..	6 14/3	36/– to 40/–	34/–	19 0	16 0	17 0	*1 9/3	‡ 17	1 8
5	Moy	—	33/– to 39/–	33/–	16 15	14 16/3	16 17/6	—	—	—
8	Irvinestown ..	7 7/6	38/– to 40/–	33/6	17 0	16 0	15 10	*1 15	—	1 12/6
9	Dungiven ..	—	31/– to 39/–	33/–	—	15 0	—	—	*1 7 ‡ 14	1 6/6
10	Crossgar ..	—	37/– to 40/–	—	18 10	—	—	—	—	1 15
10	Enniskillen ..	5 17/9	33/– to 41/–	33/–	17 0	15 10	15 0	†1 11	†1 2	1 14
10	Kilrea	6 13/9	34/– to 40/–	34/–	18 0	19 0	—	—	—	1 7
12	Ballygawley ..	—	31/– to 42/–	32/6	19 0	15 0	17 10	—	—	1 17/6
12	Strabane ..	6 0	37/– to 40/–	34/–	16 0	—	—	—	‡ 13/6	—
15	Camlough ..	5 0	32/– to 40/–	33/6	17 10	18 0	15 0	*1 12	—	—
17	Lisnaskea ..	4 18/3	30/– to 38/–	34/–	17 0	16 0	15 0	—	—	1 10
18	Ballynahinch ..	—	38/– to 40/–	—	19 0	18 0	17 10	—	—	1 15
20	Portadown ..	5 16	34/– to 38/6	35/6	19 0	17 10	18 0	—	—	1 12/6
22	Fintona ..	6 2/6	38/– to 40/–	35/–	18 0	16 10	16 15	—	—	1 12/6
22	Moneymore ..	5 12/3	35/– to 40/–	34/6	21 0	17 5	—	—	‡ 14/3	—
25	Antrim ..	5 13/9	37/– to 40/–	39/–	—	—	—	—	—	1 12/6
26	Castlederg ..	5 10	36/– to 41/6	37/–	16 0	—	—	—	‡ 16	1 10
26	Killylea ..	—	30/– to 44/–	36/–	18 10	15 10	16 0	—	*1 10 ‡ 18/6	—
27	Ballymena ..	7 2/6	27/6 to 42/–	—	24 0	23 10	22 0	—	—	1 13

* Downs and Cross. † Long Wools. ‡ Mountain.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods:—Months of November, 1937, October, 1937, November, 1936; Eleven months ended 30th November, 1937, and 30th November, 1936.

PORTS OF:—	CATTLE.						SHEEP.				PIGS.			
	Fat	Stores	Milch Cows	Springers.	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	Horses
Belfast	5,173	7,852	1,626	45	—	14,696	6,479	1	—	6,480	10,088	—	10,088	119
Larne	6	1,724	—	—	—	1,730	51	—	—	51	2,532	268	2,800	22
Londonderry ...	124	5,291	86	80	295	5,876	1,241	—	—	1,241	463	—	463	1
Newry	—	180	—	1	—	181	223	—	—	223	—	—	—	—
Total, November, 1937 ...	5,303	15,047	1,712	126	295	22,483	7,994	1	—	7,995	13,083	268	13,351	142
Total, October, 1937 ...	3,919	13,436	2,030	150	237	19,772	9,493	55	—	9,548	6,918	81	6,999	123
Total, November, 1936 ...	4,856	11,885	1,428	134	146	18,449	6,663	—	—	6,663	4,709	231	4,940	210
Total, Eleven months ended 30th November, 1937 ...	53,397	175,494	17,036	2,120	4,069	252,116	51,037	392	78,398	129,827	121,236	2,802	124,038	2,976
Total, Eleven months ended 30thNovember, 1936 ...	68,439	158,991	15,652	2,135	12,839	258,056	45,489	535	109,587	155,611	42,419	1,051	43,470	4,656

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st October, 1937, and the ten months ended 31st October, 1937, with comparative figures for the corresponding periods in 1936. This information also includes trade with the Irish Free State across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY.	IMPORTS.				EXPORTS.			
	Month ended 31st Oct.	Month ended 31st Oct.	10 months ended 31st Oct.	10 months ended 31st Oct.	Month ended 31st Oct.	Month ended 31st Oct.	10 months ended 31st Oct.	10 months ended 31st Oct.
	1937	1936	1937	1936	1937	1936	1937	1936
Bacon ... ... cwt.	4,121	2,954	33,064	29,118	39,538	38,505	313,965	329,690
Hams ... ... cwt.	1,337	2,279	15,379	19,582	11,909	14,030	102,923	119,132
Pork ... ... cwt.	328	1,199	4,384	9,807	2,291	2,963	27,543	31,996
Butter ... ... cwt.	14,626	18,121	179,682	177,485	672	772	3,395	6,194
Eggs ... ... gt. hds.	24,064	28,051	799,049	1,053,522	200,468	216,016	3,097,454	3,205,431
Oat Products (inc. Oatmeal) cwt.	2,967	1,910	21,152	24,642	7,660	6,602	66,155	61,268
Potatoes ... ... tons	93	10	6,135	10,918	*8,717	*15,055	*146,566	*184,646
Poultry ... ... cwt.	188	299	2,558	3,467	13,313	12,709	156,948	140,947
Grass Seeds ... cwt.	673	1,768	7,582	11,717	10,178	9,026	249,658	300,665

* These figures represent the quantities of potatoes inspected for shipment by the Ministry of Agriculture.

There were no imports of oats direct from abroad during the month of October, 1937, or in the corresponding month last year.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 20 fairs in Northern Ireland, during the months of November, 1936, and October and November, 1937 :—

Description of Live Stock.	November 1936		October 1937		November 1937	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ..	8 557	5 872	9,061	5,544	8,365	6,134
Fat Cattle ..	1,460	1,300	1,421	1,170	1,456	1,292
Dairy Cattle ..	1,465	1,179	1,443	1 104	1 208	1,011
Sheep ..	447	314	2,538	1,878	261	119
Lambs ..	535	337	2,404	1,667	695	442
Young Pigs ..	3,337	2,390	2,837	2,352	3,080	2,343

Medium to small offerings of store cattle at fairs last month were of moderately good quality and condition. There was a steady improvement in trade during the month, and prices moved upward. Good types of polly bullocks, in forward condition, were in keen demand for fattening, and heifers suitable for breeding also met a brisk trade at higher prices. Good young stores for out-wintering remained in favour at firm rates. Fat cattle were average turnouts, and a much livelier trade was experienced in all districts, with prices recording advances, particularly in the latter half of the month. The best sellers were well-finished, medium-weight cattle, but heavy animals of quality and finish were a strong feature at some centres. Small supplies of dairy cattle remained in firm request. Best types of good uddered young cows and heifers were quickly brought up at slightly higher prices, and even medium quality stock were readily disposed of at remunerative rates.

Smaller offerings of sheep and lambs were generally a dull trade. Fat animals met a fair local enquiry at some centres, and a few lots of breeding ewes also changed hands, but otherwise business was comparatively light in this section, and prices generally were a little cheaper on the month.

Young pigs were in medium supply, and business at most centres was fairly steady at almost late rates. A better tone was evident towards the close of the month, when prices tended to harden. Sows for breeding were in small numbers, and the best types of Large York and York crossbreds were in demand at recent prices.

11th December, 1937.

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MINISTRY OF AGRICULTURE.

List of Leaflets and other Publications.

LEAFLETS.

No. 1. Flax Seed, 1936.
„ 2. Improvement of Farm Poultry.
„ 3. Feeding for Egg Production.
„ 4. Marketing of Eggs.
„ 5. The Dishorning of Calves.
„ 6. The Packing of Apples in Standard Boxes
„ 7. Potato Trials.
„ 8. Seed Testing for Farmers.
„ 9. The Renovation of Orchards.
„ 10. Fruit Tree Pests—Capsid Bugs.
„ 11. Fruit Tree Pests—Aphides and Apple Sucker.
„ 12. Fruit Tree Pests—Caterpillars.
„ 13. Contagious Abortion in Cattle.
„ 14. Cheese-making on the Farm.
„ 15. Suitable Varieties of Fruit.
„ 16. The Feeding of Dairy Cows.
„ 17. Home Bottling of Fruits and Vegetables.
„ 18. Marketing of Dead Poultry.
„ 19. How to Feed Linseed.
„ 20. The Hatching and Rearing of Chickens.
„ 21. The Uses and Advantages of Portable Poultry Houses.
„ 22. Leather-jacket Grubs.
„ 23. The Handling and Care of Wool.
„ 24. Fluke in Sheep.
„ 25. The Rearing and Management of Young Horses.
„ 26. Ordnance Survey Maps for Farmers.
„ 27. How to Keep Eggs Clean.
„ 28. The Construction of a Laying House for Poultry.
„ 29. The Selection and Breeding of Laying Hens.
„ 31. Coccidiosis in Poultry.
„ 32. Roup of Poultry (Fowl Pox).
„ 33. Spraying Calendar for Apple Orchards.
„ 34. The Pruning of Apple Trees.
„ 35. The Fattening of Pigs.
„ 36. Advantages of Milk Recording.
„ 37. The Raising and Fattening of Turkeys.
„ 38. The Destruction of Charlock.
„ 39. The Production of Clean Milk.
„ 40. The Laying Down and Management of Temporary Pastures.
„ 41. Blackleg, Blackquarter or Quarterill.
„ 42. The Purchase of Balanced Rations for Dairy Cows.
„ 43. Tuberculosis in Poultry.
No. 44. Results of Crop Experiments, 1935.
„ 45. The Breeding and Rearing of Pigs.
„ 46 Hints for Winter Egg Production.
„ 47 The Care and Management of Sheep.
„ 49. American Gooseberry Mildew.
„ 50. Potato Blight.
„ 51. Butter-making on the Farm.
„ 52. Gapes in Chickens.
„ 54. The Breeding and Rearing of Calves.
„ 55. Destruction of Ragwort or Bendweed.
„ 56. Identification of Egg Supplies.
„ 57. How to have Eggs of First Quality.
„ 58. How the Fertilisers and Feeding Stuffs Act benefits the Farmer.
„ 59. Bacillary White Diarrhoea (Pullorum Disease).
„ 60. Advantages of Winter Agricultural Classes.
„ 61. The Care and Management of Breeding Bulls.
„ 62. The Production of Timber on the Farm.
„ 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet.
„ 64. The Destruction of Warble Fly Maggots in Cattle.
„ 65. The Packing of Apples in Barrels.
„ 66. Seed Testing Facilities for Traders.
„ 67. The Cultivation of Vegetables.
„ 68. The Cultivation of Strawberries.
„ 69. The Construction of Piggeries.
„ 70. Ringworm.
„ 71. The Cultivation of Raspberries.
„ 72. Tree Planting for Shelter and Ornament.
„ 73. The Propagation and Maintenance of Healthy Stocks of Potatoes.
„ 74. New Pure Strains of Flax.
„ 75. Pig Production and the Pigs Marketing Scheme.
„ 76. Acarine (Isle of Wight) Disease of Bees.
„ 77. Licensing of Milk Producers and Distributors.
„ 78. Graded Milk.
„ 79. The Picking and Storing of Apples.
„ 80. Hoose or Husk in Farm Stock.
„ 81. The Construction of Cow Houses.
„ 82. White Scour in Calves.
„ 83. The Care, Management and Feeding of the Poultry Breeding Stock.
„ 84. Lime and Liming.

Any of the above leaflets may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

CIRCULARS.

No. 1. Phosphatic Fertilisers.
„ 5. Why Pay a Tax on the Horns of Cattle ?
„ 8. Basic Slag.
„ 9. Smut in Oats.
„ 10. Purchase of Fertilisers and Feeding Stuffs.
„ 11. Fertilisers and Feeding Stuffs Act—General Summary.
„ 12. The Treatment of Liver Fluke.
„ 13. The ox-Warble Fly.
„ 306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations.

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
Reports on Egg-Laying Tests.
Crop Insurance.
List of Growers of Certified Crops of Immune Varieties of Potatoes.
List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
The Ministry's Monthly Report.
Register of Premium Stallions.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.

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